



SHIMER CUTTER HEADS



Samuel J. Shimer & Sons
Milton, Pa.

U. S. A.

Important



The Name and

The Record Number.

The Shimer Cutter Heads

Enter our records with your address indexed to a page in the Order Book, recording the numbers stamped on the Heads sent you. Your investment in these tools will pay you 100 per cent. profit and afford you more real pleasure in the working of them than any purchase of like cost in the list of Planing Mill Tools. Yes, we have an army of little workers 70,000 strong enrolled under the banner of the Planing Mills in operation in every part of the globe. And why should it not be so? We have before us the work upon the Cutter Heads as an every day duty and that we keep well in the lead of all the requirements is evidenced by the very valuable improvements made upon the Shimer Cutter Heads from year to year.

SEE OUR PATENTS:

Under date of July 18th, 1882. *To hold the Cutter between two fixed surfaces.*

Claim 1.

1. A head of a cutter-head tool, formed with bit-seat chambers alternately arranged on opposite sides of the single flange, and the bolt-hold structures formed or provided with keys or splines, substantially as described.

Claim 2.

2. The combination, substantially as described, of the head formed with inclined bit-seats alternately arranged on opposite sides of the flange, circular bits, and fastening-bolts with keyways or their equivalents, substantially as described.

Claim 3.

3. The organized cutter-head composed of the solid head with the formed bit-chambers with the double inclined surfaces and alternately arranged, the circular bits arranged in series, which partially overlap each other on the inner line of the cut, and the fastening bolts and nuts with locking means for preventing the turning of the bolts, substantially as described.

April 28th, 1891. *To center the Bit to its seat perfectly and to hold it within a socket.* Claim 1.

1. In combination, the cutter-head formed with bit-seats having the middle portions around the bolt-holes dished out into conical-shaped seats, circular cutting-bits formed with conical-shaped bottoms projecting from the body of the bit to set in the bit-seats of the cutter-head, and clamping-bolts projected through the bits and head, substantially as described.

June 7th, 1892. *To carry the carve made by the side heads in an undisturbed line with the surface cut of the cylinder head on two part Cutter Heads.* Claim 3.

3. In a two-part cutter-head, the combination of a lower section adapted to carry the bits to make the upper carve of the cut and an upper adjustable section adapted to carry the bits to make the lower carve of the cut, bits on the lower section, and bits on the upper section intermediate of the others, substantially as described.

October 9th, 1894. *To strengthen the head metal in the seat and to carry a better clearance to the Bit.* Claim 1.

1. A circular-bit cutter-head formed with a base-flange having bit-seats on the opposite upper and lower faces thereof, said bit-seats being oppositely inclined in the direction of rotation, and oppositely inclined from the base of the flange outward and having bolt-holes oppositely inclined from the bit-seats inward, bits on the bit-seats, and clamping-bolts in the bolt-holes, substantially as and for the purpose specified.

May 28th, 1895. *To apply the Expansion principle to Heads of smallest practical surface cut.* Claim 4.

4. A cutter head made in two sections each comprising the concentric hubs and flanges, the latter having cut away portions and overlapped portions and the expansion springs, eccentric to the hubs, between the overlapped portions, substantially as described.

✻•CAUTION•✻

We do not show our hand by way of display. We have been your faithful servants for many years without ostentation and we beg to say that we have earned every dollar that the public have paid us for our labors apart from patent protection, but the time is now when we must caution the public against the purchase and use of all imitations. We make the only genuine Shimer Cutter Heads.

3500

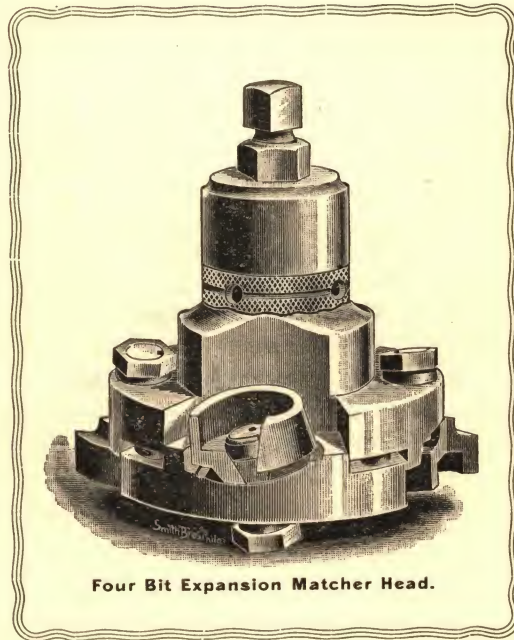
ILLUSTRATED CATALOGUE
OF THE

1868—1896.



SHIMER CUTTER HEADS.

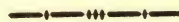
*
For
Flooring,
Ceiling,
Siding,
Wainscoting,
Ship-Lap,
O. G. Batten,
O. G. Siding,
Plain Jointing,
Glue Jointing,
Sucker Rods,
Hoops,
Trunk Slats,
Blind Slats,



Four Bit Expansion Matcher Head.

*
For
Blind Rods,
Flush Door
Moulding,
O. G. Doors,
Sashes,
Blinds,
Cope Heads
to match,
Dado Heads,
Special Tools
for all
accurate
work.
*

With "FULL SIZE" representations of Wood Patterns
as made by the various tools.



MANUFACTURED ONLY BY

Samuel J. Shimer & Sons,

MILTON, PENNSYLVANIA,

1868.

•U. S. A.•

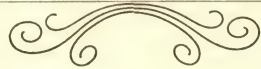
1896.



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BY

SAMUEL J. SHIMER & SONS.



☞ *We make the Cutter Head a Specialty* ☞

Samuel J. Shimer & Sons.

Prices—Terms

and *The Trial System.*



VALUES are measured by comparisons. We, therefore, publish our prices in connection with our illustrations in this Catalogue, and describe each style of the Shimer Cutter Head made, and try as nearly as possible to designate their place of greatest usefulness.

Preference may be given to the Combination Head, or to the Straight-Bit Expansion Head, when one Head or one set of Heads must figure in a great variety of work. But where stock work is made the selection (usually and rightfully too) is made of the Shimer Heads with Circular Bits. Of this class we now show quite a variety, and have recently made several very valuable improvements therein, covering the principles of Expansion Adjustment—Bit Seat Chambers—Inclination of Bit Seat Chambers—Inclination of Bolt—Location of Holding Nuts—Clearance and Diamond Point to lead of cut—Improved Shape for Circular Bit—Increased Strength of Circular Bit, also greater holding capacity of Bolt and Seat to which the Circular Bit is secured. A careful study of the work of illustration is requested.



✻—• TRIAL •—✻

It may not be necessary to enter these Heads for trial where they are known, but to those, new in the business, and to whom the Heads are a new thing, **we offer trial.** To any responsible party getting up a new machine or any new design pattern—or work—we offer to take the chances of fitting the Shimer Head to the machine to work the pattern specified.

It is upon this plan of Trial that we have sold 65,000 Heads.

Terms.—Invariably 30 days cash, unless otherwise agreed upon under the trial system. Discounts on application.

S. J. SHIMER & SONS,

MILTON, PENNSYLVANIA.

Samuel J. Shimer & Sons, Milton, Pa.

HOW TO ORDER.

See Special Card sent on request by S. J. Shimer & Sons, (a copy of this exactly.) Fill in the measurements and mail it to us and we will take the chances of fitting your machine and of pleasing you in every particular.

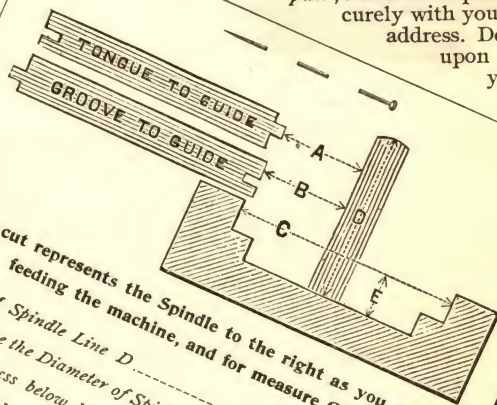
***** CARD *****

IF you already have a set of Shimer Heads that fit your machine, and you want another set, then the best way to order is to write us as follows: "Make for us a set of Heads to work interchangeably with Heads numbered _____ (find number stamped on Heads you have) and follow with purpose you want the Heads for and we will understand.

We keep a record of all the Heads we make, in *fire-proof vaults* and we note down carefully every peculiarity of the Head and we can duplicate them in whole or part at any time.

Exchanging Heads or Cutters.

Should you find it necessary to send us Heads or Bits for *exchange or repair*, mark them plainly and securely with your name and address. Don't depend upon the letter you write us alone.



This cut represents the Spindle to the right as you stand feeding the machine, and for measure GIVE

Height of Spindle Line D inches
Send a Wire the Diameter of Spindle
Depth of Recess below level of Bed, Line C
Free scope Head has to turn in, Line E
Diameter of Head in use, (solid) across Bottom
Can you move the Fence or Guide?
Give length of Line from Spindle to jointed edge of Board, A or B
Tongue or Groove to Guide (see diagram) and cross one of them out.
Groove $\frac{1}{4}$ wide by $\frac{3}{8}$ deep, or
Give Maker's Name of Planer
Is the Board Matched Surface Side up or down?

We give correct measure for _____ Heads
which you may send on trial for _____ days;
if they work to our profit we will pay for them;
if not we will return them. Send Heads to _____

(OVER.)



How to Sharpen Bits:

We advise the use of an 8-inch taper file for the purpose. The careful use of an emery wheel to rough out the notch of the Bit is all very good, but avoid bluing the edge, and FINISH with the file, bringing the Bit to a nice edge fitting the gauge—the use of which you will see illustrated on page 10.

Address all

Communications to

SAMUEL J. SHIMER & SONS, Milton, Pa.

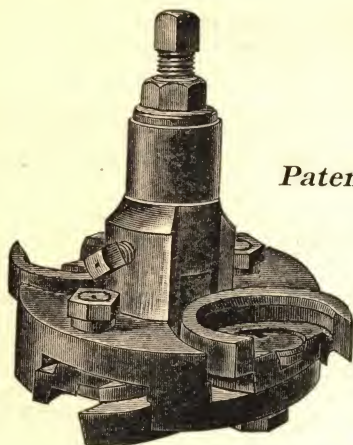


FIG. 1.

Patented July 18, 1882.

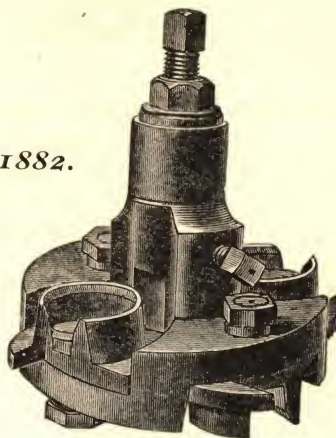


FIG. 2.

THE Heads represented by the accompanying engravings have been on the market for the past twelve years. *Their record classifies them as the Standard Shimer Matcher Heads of 1882.* They carry the flat seats for the Bits, (inclined for clearance only), having a central bolt hole provided with a locking device for the bolt. *Each Circular Bit is held between two fixed surfaces, viz: the seat and the head of the bolt.* The Bits do not move out of position when bolts are tightened. **Made only when ordered.**

Price, Heads working to 5 inches surface cut diameter	\$36.00
" Bits per set, (8)	12.00
" Heads working over 5 inches surface cut diameter	38.00
" Bits per set, (8)	14.00

Much attention has lately been given to *matching hard woods* and we have strengthened the Heads in their bit seats and improved on the shape and shear cut of the Shimer Circular Bits to meet the demand coming from hard-wood districts.

We Illustrate the Improved Head on Page 11,

but make the kind above specified also for those who may want them to work flat Circular Bits interchangeably with Heads that are in use. ***But we say here that the very best Cutting Heads of Solid Section we make to-day are those shown on page 11.***

-•DESCRIPTION-•

The Shimer Cutter Heads are all made after one general plan. They all have alternate bit seat chambers within which are seated the Bits in upper and lower series, alternately arranged to shave out the chip from a dividing line of cut. First one Bit makes a cut, then the next Bit of the other series follows. The entire cut is therefore not made at one carve, but first one shave is made, then the other, and both slightly shearing—dividing the chip along the centre line of cut.

There being two Bits to make the full carve, one Bit is placed in the upper series on the Head and upon inclined seats that give to the Bit a position to clear its cutting points. The other Bit is placed in the lower series on the Head, and upon inclined seats

and gives to this Bit a position to clear its cutting points—both Bits work together to complete the full carve, but they cut alternately and rest upon seats having opposite inclinations working to or from a dividing line of cut.

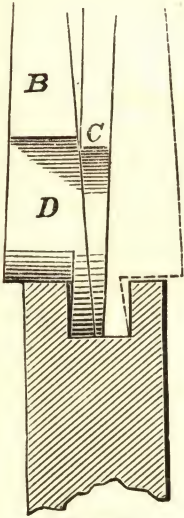


FIG. 3.

Permit us to illustrate, by diagram: Fig. 3 showing Bit D in the position it occupies when making a cut. The Bit C which follows, to complete the work, is given in outline. This shows how the chip is divided, and from it you will understand that the several Bits that thus complete the work are arranged in upper and lower series, upon a special Head, that has a series of seats to which these Bits are secured.

The Bits are inclined alternately to or from a dividing line central to this arrangement of seats, as may be necessary to suit the work. The object of thus inclining the seats, is to give to the Bits thus arranged, a side clearance and they take a position the same as a saw tooth when set. You will observe, therefore, that the Bits, when at work, strike the lumber with their edges only, which are slanting, to counteract the inclining of the seats, and cut square. The special feature of a draw cut, as made with Bits having perfect side clearance and a division of chip, is plainly illustrated by the several engravings, and fully appreciated by every mechanical mind. These tools will turn out first-class work with full cutting edges on hard, cross-grained and knotty lumber, and save their cost many times in a single season. The inexperienced workman can readily operate them and the mechanic well up in the art of working in wood fully appreciates their make-up.

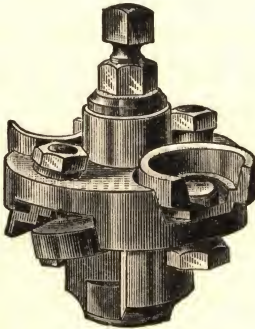


FIG. 4.

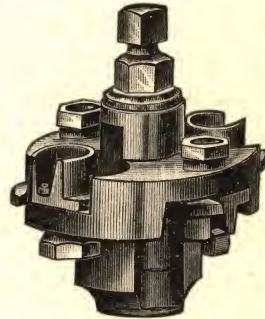


FIG. 5.

This is but another pattern of the Standard Shimer Matcher Heads to fit matching machines, the spindles to which, drop below the bed. They are provided with our locking device for the bolt, to hold the Bits between two fixed surfaces. They are made with flat seats inclined for clearance only, if so ordered to work the flat Circular Bits. If left to our judgment, however, we fit them up with Bits shown by Figs. 10 and 11 and all the latest improvements to the head seats. See Fig. 6.

Price, Heads working to 5 inches surface cut diameter	\$36.00
" New Bits per set, (8)	12.00
" Heads working over 5 inches surface cut diameter	38.00
" New Bits per set, (8)	14.00

Perfect workmanship and up-to-date improvements have kept the *Shimer Cutter Heads* in the lead—and they have made for themselves a name in the “History of the Planing Mill.” Their record as coming to us through the mails, gives them a matching capacity of 130 lineal feet per minute. Just what rate of feed the builders of wood working machinery will next maintain, remains a question,

But to meet Any and Every Want

And to be of further service to the Planing Mill industry, now largely engaged in *matching hard wood*, we have developed our latest improvements, covered by patents under dates of April 28th, 1891—June 7th, 1892—October 9th, 1894—May 28th, 1895—and now build the Shimer Cutter Heads with seats concaved or dished out about their bolt hole centres to receive the conical under portion of the *Improved Circular Bits* that center themselves about the holding bolts—which bolts take the position shown in

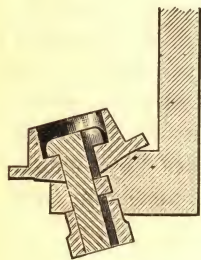


FIG. 6.

Fig. 6, central to the *New Concaved Seat* which is inclined for clearance after a line between that of the axial line and the tangent line of the Head, by reason of which we are enabled to build up more of a *diamond point* for the Bit to lead in the cut, and the edge line of the Bit takes a better position for matching hard woods. The Bit holding bolt, by reason of its slanting position, locates the nut further away from the strip or piece of lumber that is passing through the machine, and takes a deeper and stronger grip upon the head metal. See Fig. 6, showing the Bit as we fasten it to the

concaved seat, which is not in a direct line with the force of the cut, therefore the stroke does not have so great a twirling power on the Bit, and a lighter tension on the bolt will hold the Bit in matching position upon its centre than is required to hold a Bit upon a flat seat in line with the cut. (Compare Figs. 6 and 7.)

To Further Illustrate the Latest Advantages

gained by reason of the Bit construction, we here represent two Bits to cut the tongue on a board, each shown in cross section. (See Figs. 8 and 9.) The Bit represented by Fig. 8, by reason of



FIG. 8.



FIG. 9.

its position on a flat seat horizontally in line with the cut, (See Fig. 7), must take shape as shown in cross section. The diameter of its tongue cutting edge is smallest next to the tongue line of cut and the point that leads has for that reason less protection in the cut than has the lead point on Bit shown in cross section, Fig. 9, representing the latest construction of *Matcher Bit*, whereupon the tongue cutting edge is the largest next to the tongue line and the Bit consequently carries more of a *diamond point* to lead the cut. A better clearance is given it by reason of its position on the Head and it will run longer with one sharpening.

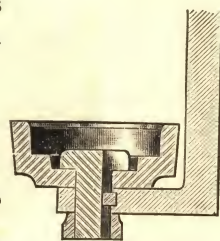


FIG. 7.

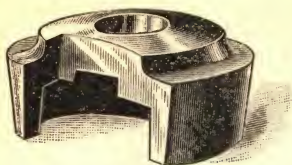


FIG. 10.

*These Cuts represent
The New Style Bits
with conical
(self-centering) seats.*

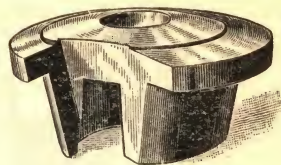


FIG. 11.

We put this style of Circular Bit on all of our regular Matcher Heads for hard or soft wood—fitted into concave bit-centering seats on the Head—with holding bolts and nuts that hold the Bits between two fixed surfaces, and the more securely is this combination because the Bits rest within sockets and a part of the head metal encircles a part of the Bit, giving to the bolt a greater holding capacity. We know of no stronger combination than this, which is equally applicable to our Heads with solid flange and our Heads with sectional flange for *Expansion, or enlargement of tongue and groove.*

Much attention has lately been given to *matching of hard woods* and we have strengthened the Shimer Cutter Heads in all their parts and especially in their bit and seat combinations, with improvements on the shape and shear cut of the Circular Bits, to enable us to meet the demand coming from the hard wood districts.

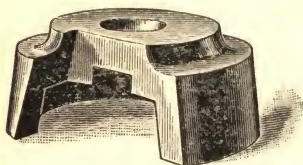


FIG. 12.

*These Bits apply to Heads
shown on page 6.*

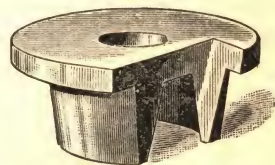


FIG. 13.

Our old style flat Circular Bits, (see Figs. 12 and 13,) are adapted to be secured to flat seats upon the Cutter Head, which seats are inclined forwardly and rearwardly in alternate positions, giving to the Bits a side clearance only.

On our present make of Matcher Heads the Bits are inclined both forwardly and rearwardly in alternate positions on tangent lines to the circle of the Cutter Head, and the Bits are also inclined from both sides of the head flange inwardly toward the center line of the work, which position gives them additional clearance and a better cut.

The Bits only touch the work with their cutting edges, which are sharpened with a file or an emery wheel when dull, and as they wear away they are brought forward into their true working positions by moving them about their center. It will be noticed that the entire circle of Bit serves in turn to make up the cutting edge—comparatively the Circular Bit outwears any other many times and always produces the same standard work, (the shape of which is turned into the outer circle of the Bits, which cut the same pattern until worn entirely out) on cross-grained and knotty lumber just as completely as on the best selected No. 1 material.

The Bits must be sharpened after the same shear line of cut—and only from the notch side—don't touch them with a file on their outer circles into which their cutting shapes are moulded. They must also be set into the same cutting position on the Head to cut the exact pattern for which the Bits are shaped—usually a pattern of your own selection when you order the Head, a variety of which are shown in full outline in this catalogue, beginning on page 20.

GAUGE
For the Tongue Head.

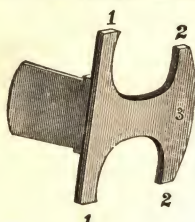


FIG. 14.

GAUGE
For the Groove Head.

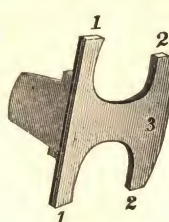


FIG. 15.

We here show a set of Gauges, (Figs. 14 and 15) one for the Tongue Head and one for the Groove Head. To set the Bits into their cutting positions place the arms of the gauge 1, 1, in touch with the round part of the nut that holds the Bit. The arms 2, 2, pass down by the side of the Head as a steady guide; the lug on the inside located where we place figure 3 will rest on the outer circle of the Head. With the gauge in this position, bring the notch of the Bit up against the face of the gauge and the cutting edge of the Bit will be in the right position to work the exact pattern for which the Bits are made. The gauges reverse to set both the upper and lower Bits on the Head—have slanting faces and the Bit edges filed or sharpened thereto, will have a draw cut, a division of chips and perfect clearance—a combination fully appreciated by every mechanical mind.

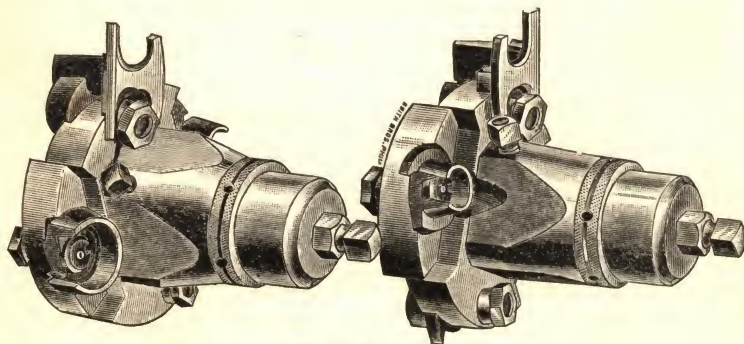


FIG. 16.

We here show a set of Heads (Fig. 16) with the gauge for the Tongue Head in place to fix the position of the lower Bit on the Tongue Head and the gauge for the Groove Head is in place to fix the position of the lower Bit on the Groove Head. By a careful use of these gauges you will keep your work up to the true standard, a consideration of much value, to have one shipment of flooring match with the other shipment made months or years previous. Dealers and builders greatly appreciate this uniformity of pattern.

How to give an Order for

The Shimer Cutter Heads

And profit many times their cost
in a single season.

See pages 5, 55, 60, 61.

THESE CUTS REPRESENT

The Standard Shimer Matcher Heads

WITH FOUR BITS

And all the Latest
Improvements,
(Except Expansion.)

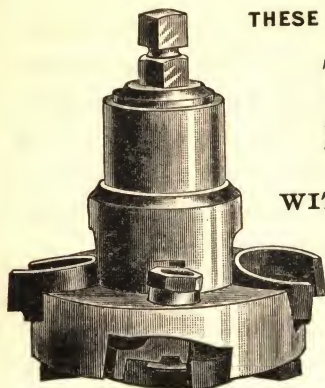


FIG. 22.

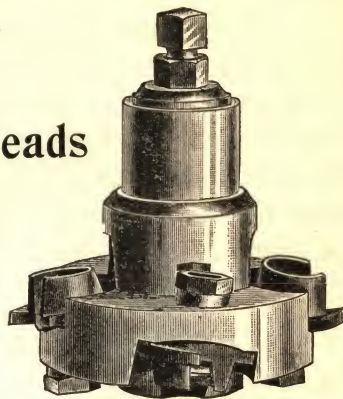


FIG. 23.

They are provided with our locking device to the bolt for the holding of the Bit between two fixed surfaces. The Heads have concave bit seats inclined for clearance on a line tangent to the Head. The seats are also inclined outwardly on the axial line of the Head to admit of bit improvements and for strengthening the head seats, and for locating the nut more out of the way of the passing lumber. This double incline given the seats determines a better diamond point for the lead of cut and carries the greater protection to the edge of the Bit which figures in a smaller circle as it cuts wider.

The Bits have conical under surfaces to fit into the concave seats on the Head, which the more accurately and the more firmly seat the Bits in position.

Price, Heads with improved seats taking the improved Bit and working to a 5-inch surface line of cut, per set	\$36.00
" Bits per set, (8)	12.00
" Heads with improved seats taking the improved Bits and working to a larger than 5-inch surface line of cut, per set	38.00
" Bits per set, (8)	14.00

THE SHIMER

Expansion Matcher Heads

WITH FOUR BITS.

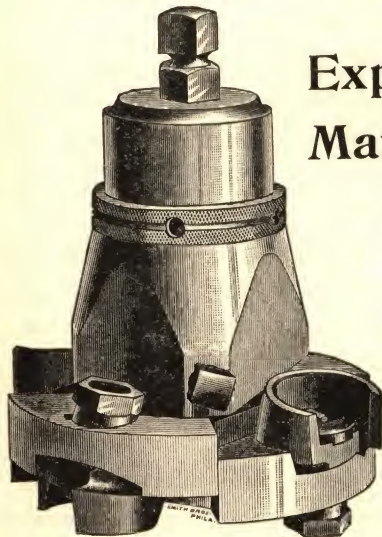


FIG. 29.

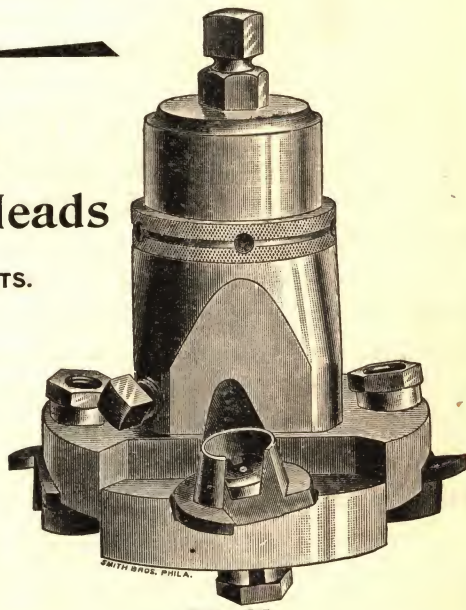


FIG. 30.

These Heads are made like the solid heads, (Figs. 22 and 23), with reference to their bit combinations and the description there given will apply. The exact photograph of the several Expansion Heads will appear like Figs. 29 and 30 when the expanding spring is central with the Head as shown by Fig. 28.

Price, Heads per set complete with 4 Bits, each working to a 5-in. surface cut diameter or less	\$40.00
" Over 5-inch surface cut diameter	42.00
" Bits per set, (8)	12.00

The bushing carrying the top screw is protected by a threaded sleeve screwed over the top of the inner section, and is run down to a fixed line to limit the adjustment of the outer section, so that the Bits on the one section cannot pass the clearance limit, to interfere with the lead cut of the Bits on the other section. The cut of the Bits in the several series must overlap on the dividing line, *but must not overlap the clearance cut* of the Bits in the opposite series. We, for that reason, make the adjustment a fixture and limit it so that the head sections cannot be set out of working adjustment.

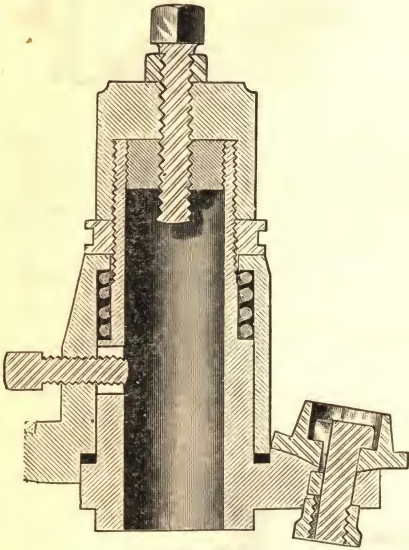


FIG. 28.

The Expansion principle as applied to the Standard Shimer Matcher Heads does not interfere with the top screw adjustment, which when once set, carries the Head in line of cut for all time. The top screw and the Bits of the upper series belong to the one head section. The Bits of the lower series are controlled by the other head section, and these are the ones that are adjusted for tight and loose work. The lock nut works a serrated joint interlocking along the upper limit of the movable section which cushions against a spring, arranged between the two sections, the tension of which is an effectual lock for the adjusting nut. The serrated joint of this adjusting nut is divided into 12 equal spaces, matching with a like 12 serrated spaces on the head section of the lower Bit series.

The nut screws up and down on the inner section of the Head, 16 threads to the inch; one full turn of the lock nut to the right would force the outer section (carrying the lower Bits) down 1-16 and would by that much enlarge on tongue or groove, but changing the lock nut one notch changes the tongue or groove only $\frac{1}{3}$ of 1-64 of an inch, a very close adjustment for tight or loose matching. These adjustable head sections interlock very securely, and are very strongly built under our latest improvements that call for a thickening of the seats as they approach the head centre. Every set of the Standard Shimer Expansion Heads that we have so far made to order is appreciated to such an extent that they are much preferred to any other that we have ever made, and duplicate orders for the same kind never fail to follow where more Heads are needed.

The tight and loose adjustment on the Shimer Expansion Heads affects the lower series of Bits only. The upper series of Bits set (by means of the top screw) to work with the surface cut of the planer head, remains a fixture, the importance of which will be understood when applied to the matching of Wainscoting or Car Siding.

The interlocking sections have a line mark in common cut into their seats when the head sections are set for regular matching, and any change made by moving the lock nut will register between these lines.

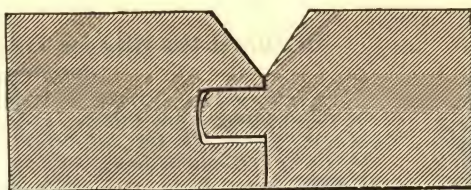


FIG. 19.

Wainscoting on Matcher Heads

Requires two Extra Bits for Each Head, to cut the upper edge of Board, as shown by the above diagram.

These Bits should be fitted to the Heads (if wanted at all) when the Heads are being made, as it requires a special fitting of the Heads to accommodate the Cutters. They can, however, be placed on any of the Shimer Matcher Heads now in use, if such Heads can be sent to us, or placed in the hands of some competent mechanic. A small part of the brass that encircles the Bit must be cut away, to accommodate this larger Bit on Tongue Head.

Price, 4 Upper Bits \$ 8.00
 " Heads complete to work above pattern 38.00

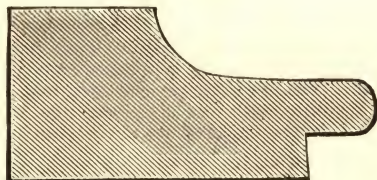


FIG. 20.

GERMAN OR NOVELTY SIDING.

This is made with two Bits working on upper side of Tongue Head, but like the Cutters for Wainscoting, requires special fitting to the Head. This is a heavy cut for a side head, and we do not recommend it for deeper work than that shown by the above diagram.

It should be considered that an additional cut of $\frac{3}{4}$ inch in depth will necessarily add $1\frac{1}{2}$ inches to the swing or diameter of Head and Bits.

Each machine should be measured carefully, to ascertain whether the space around spindle will swing such Cutters, before giving order for them.

Price, per set, 2 Bits \$ 5.00
 " Complete Siding Head 19.00

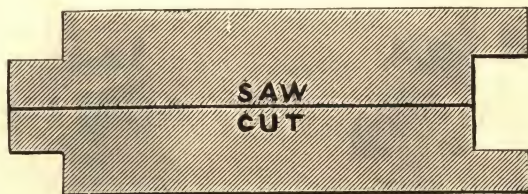


FIG. 21.

•DOUBLE $\frac{3}{8}$ SHIP LAP•

These Bits apply to the regular Matcher Heads, tongue and groove; are interchangeable with flooring Bits.

Price, per set, (8) \$12.00

To Adjust the Bits for Tight and Loose Work:

Loosen the Set Screw. Turn the steel lock nut to the right to enlarge tongue and groove—or to the left to reduce tongue or groove. *Fasten the Set Screw.* The Heads need not be taken off the spindle to accomplish this, and the Bits are not loosened.

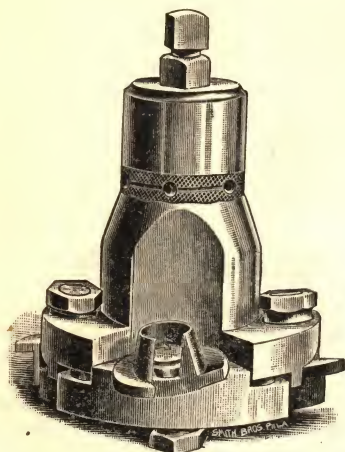


FIG. 200.

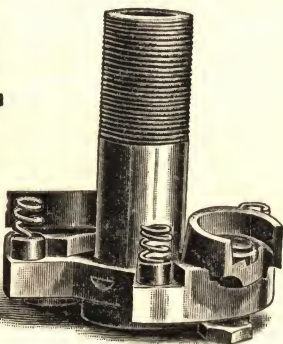
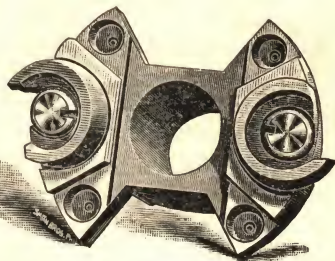


FIG. 201.



This cut represents our latest design for Expansion Heads with four Bits. Fig. 200 represents the Groove Head in operative combination. Fig. 201 represents the Tongue Head taken apart to show the relative strength and construction of the several sections. The smaller section slides freely over the central hub section and cushions with four spiral springs, which when the Head is in operative combination, are fixed within tubing located so as to shut out all dirt entrance to any part between the sections.

The adjusting nut has twelve V joints and screws down upon the central hub and compresses the springs, the elasticity of which, serve to lock the nut into fixed position at any of its twelve stops in line of its union with the upper face of the outer section of the Head which carries the Bits to work the lower half of the tongue and groove. Every stop on the V jointed adjusting nut registers $\frac{1}{3}$ of $\frac{1}{4}$ of an inch thicker or thinner on tongue or groove.

OUR LATEST Expansion Matcher Heads WITH FOUR BITS.

Fig. 202 represents a complete Tongue Head and Fig. 203 represents a complete Groove Head.

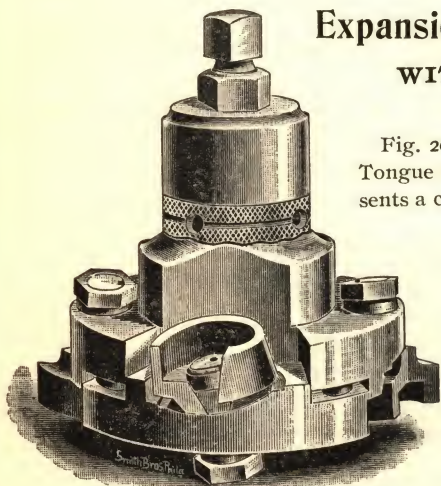


FIG. 202.

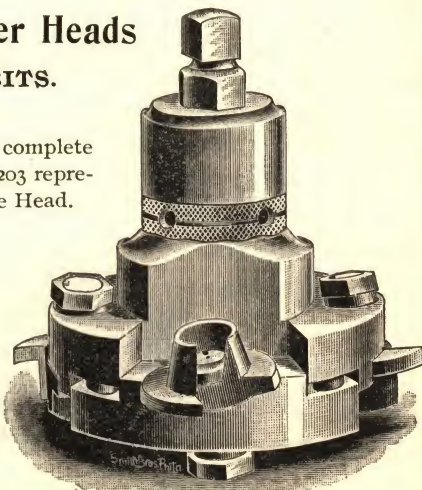


FIG. 203.

Price, per set of 2 Heads with 4 Bits each, working to a 5-inch surface cut diameter, or less . . \$40.00
 " " " 2 " " 4 " " " to a surface cut diam. of $5\frac{1}{2}$ in. and upwards 42.00
 " " " 8 Bits 12.00

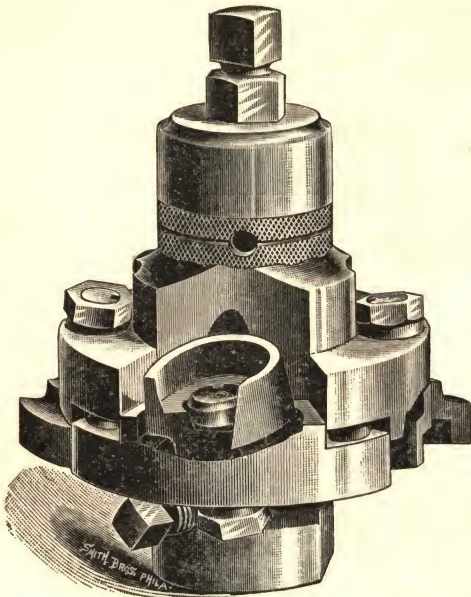


FIG. 204.

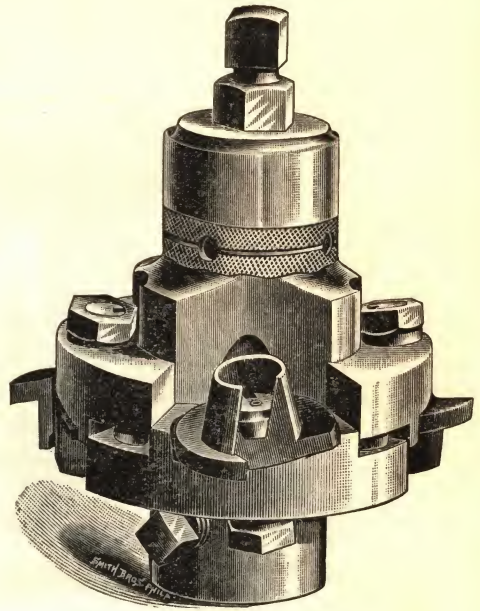
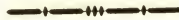


FIG. 205.

A number of machines in use as Surfacers and Matchers combined are provided with short spindles, the tops of which do not project above the machine bed level, thus admitting a wide board to pass over the top of the spindles when being surfaced. Matcher Heads for machines of this class are provided with a central hub below the Cutters, into which the set screw is placed as represented by Fig. 205, Groove Head, and Fig. 204, Tongue Head.

When ordering Heads for machines of this class it is only necessary to note upon our regular order card the full depth of the socket or cup in which the Head rotates, "line E," and the height of the spindle, "line D," from the bottom of the cup to the top of spindle. Answer all other questions in regular manner, and we guarantee to fit the machine. For price see page 14.



Vise for Holding Expansion Heads.

We represent on the following page a Vise for holding the Shimer Expansion Heads in position when the Bits are being sharpened.

The Expansion Heads should not be clamped in the jaws of an iron vise, as is the practice with the solid head. The grip interferes with their movable head sections. This vise consists simply of an iron stand that will bolt to any ordinary vise bench. It has one shaft adjustment to bring it the height to suit the filer. The shaft is provided with a socket to take the stub of the mandrel that fits the Matcher Heads. The Head shown on mandrel can take any position about the stand centre.

This Vise is also useful in holding the Standard Shimer Heads of any of the various patterns shown in this Catalogue.

Price, complete \$5.00

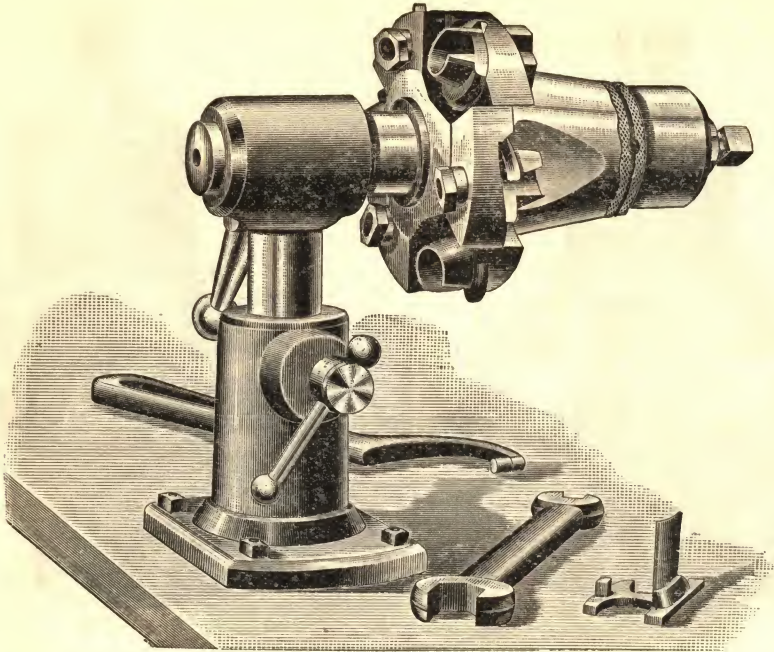


FIG. 31.

Vise for Holding Expansion Heads—for description see page 15.

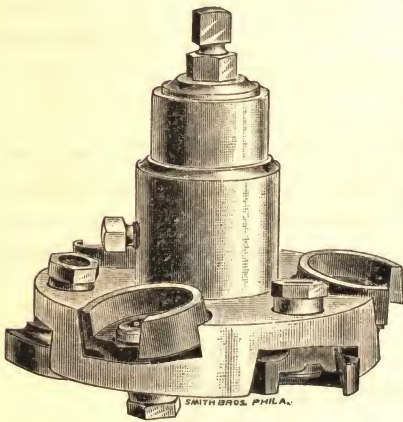


FIG. 24.

The Shimer Matcher Heads with Six Bits.

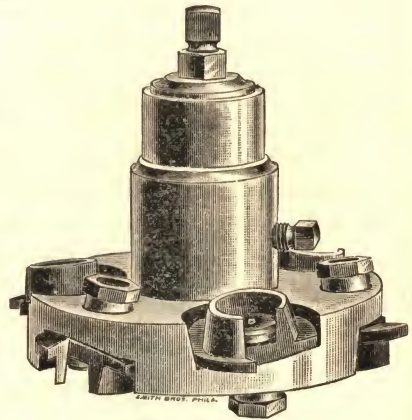


FIG. 25.

These Matcher Heads are above the medium size and are provided with six Bits in line of cut. They have also our locking device to the bolt for the holding of the Bit between two fixed surfaces. The Heads have concave bit seats inclined for clearance on a line tangent to the Head. The seats are also inclined outwardly on the axial line of the Head to admit of Bit improvements and for the strengthening of the head seats, and for locating the nut more out of the way of the passing lumber. This particular incline given the head seats determines a better diamond point for the Bits that lead in the cut and carries a greater protection to the cutting edge of the Bit which figures in a smaller circle as it cuts wider.

Price, Heads with improved seats taking the improved Bits and working to a 5-in. surface cut diameter, per set	\$42.00
" Bits per set, (12)	18.00
" Heads with improved seats taking the improved Bits and working to a greater than 5-inch surface cut diameter, per set	44.00
" Bits per set, (12)	18.00

The Shimer. —



Expansion Heads

These Heads we recommend
For matching Hard Wood
Flooring and Ceiling.

© *with Six Bits*

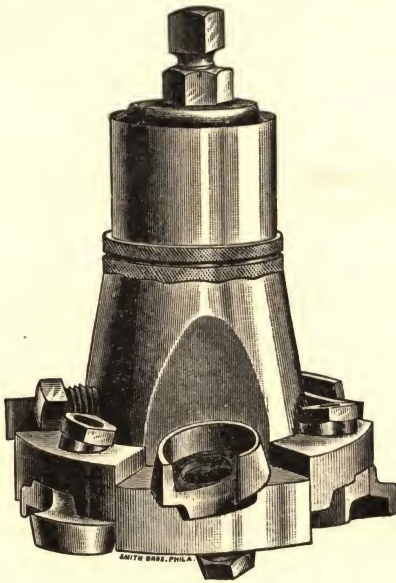


FIG. 33.

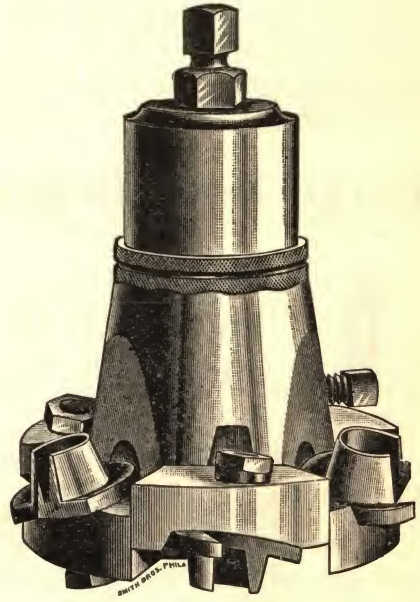


FIG. 34.

These Heads are made in two sections.

The inner section has three radial projections, which carry the upper series of Bits, and is bored to fit matcher spindles, and carries the top screw that regulates the permanent line of cut.

The outer section fits over the inner section and has also three radial projections interlocking with those on the inner section, and it carries the lower adjustable series of Bits. There are three Bits in line of the cut automatically adjustable.

The Adjustments for Tight and Loose Matching

Are regulated by the V jointed nut on the central hub of the Head. The movement of the nut one notch to the right registers larger on the tongue or groove $\frac{1}{3}$ of 1-64 of an inch. A movement of the nut three notches to the right or left will make the tongue or groove heavier or lighter by 1-64 of an inch.

On All of Our Expansion Heads

The Bits carving out the upper line of cut are secured to the inside head section, to which belongs the top screw adjustment by which the Heads are regulated to cut in harmony with the Surface Cutter Head of the machine.

This leaves the outer section of the Expansion Head provided with Bits that carve out the lower line of cut, free to respond to the head adjustment for

Tight and Loose Matching of Tongue and Groove.

It is important that the movable section of an Expansion Head controls the cut of the lower Bits on a matching machine, so that the upper Bits working in harmony with the Surface Cutter Head may not be disturbed.

By the Term Expansion



We do not mean to convey the idea that one set of Bits will do a greater variety of work on the Expansion Head than they will do on the Solid Heads.

The limit of the expansion is not measured by the change in the head sections, but by what the Bits will permit.

Thus a set of Bits made to cut $\frac{1}{4}$ inch wide groove will expand to make groove $\frac{1}{2}$ inch, less 3-32 wide, less 1-32—the allowance of 3-32 being the measure of clearance given the two leading sides of the grooving cutter, to clear in the groove, and 1-32 of an inch is left for an overlap of the grooving cutter along the center line of the cut. The same rule applies also to Bits making the tongue.

Price, Heads per set, complete with 6 Bits, each working to 5 inches surface cut diameter or less	\$48.00
“ Heads working over 5 inches surface cut diameter	50.00
“ Bits per set, (12)	18.00



When ordering NEW BITS for any of our Heads always give us the Record Number which you will find stamped on the Heads.



The Shimer Expansion Heads with Inclined Cutters.

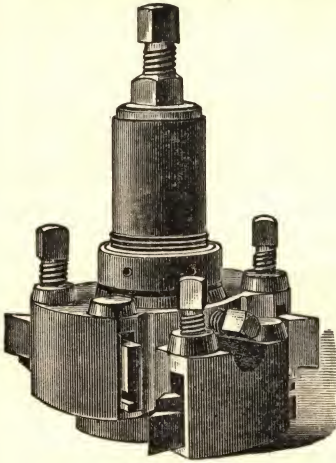


FIG. 35.

These Heads will work either way, but when you give order for Heads or Bits, explain on which side you make the groove—right or left—as you stand back of the machine to feed.

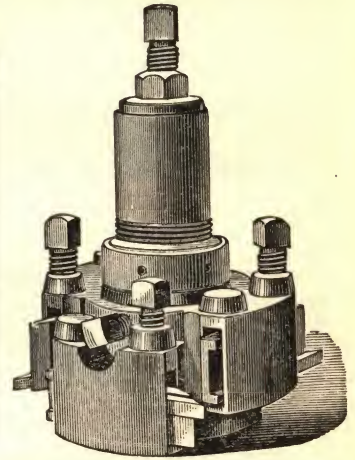


FIG. 36.

These Heads are fitted with patent Cutters that are moulded on their outer surfaces at an angle to their sides, upon which they are secured to the Head, which causes the leading points to have the necessary clearance.

These Bits embodying the principle of clearance in themselves, are arranged alternately, in upper and lower series, around the Head, and they cut alternately, dividing the chip upon the inner line of cut, holding their shape and producing standard work until worn out. They are sharpened on the face or inside only, by filing or grinding, and being adjustable in the ordinary manner, are interchangeable with Cutters of every description. The Heads are composed of two sections, and each section is provided with two slots for the Cutters.

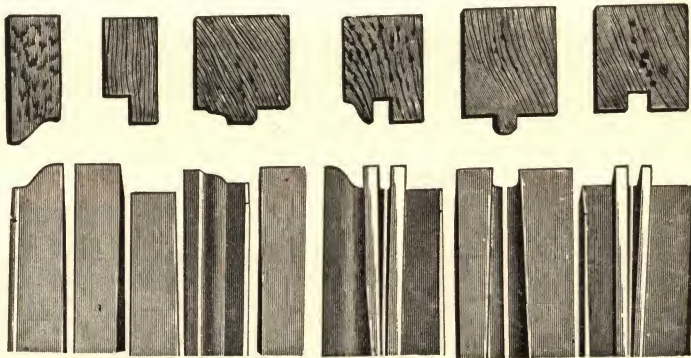
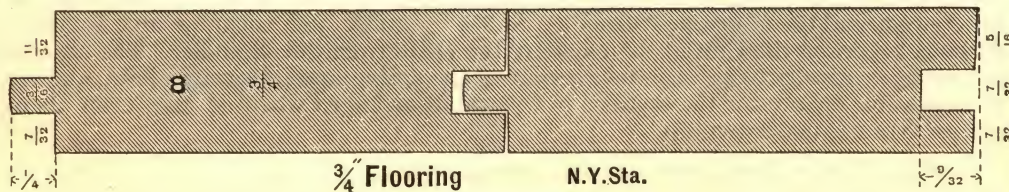
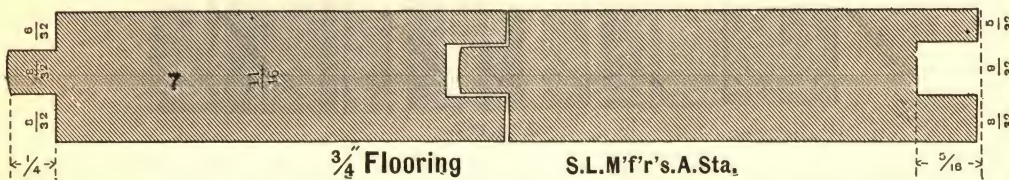
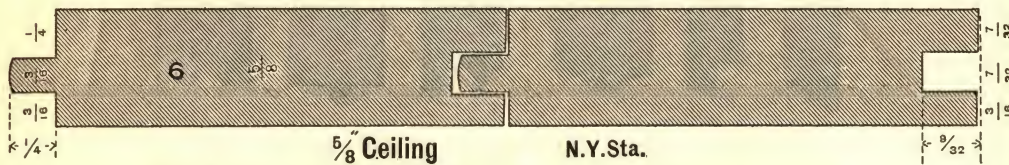
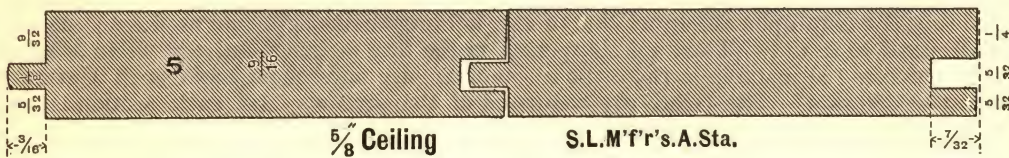
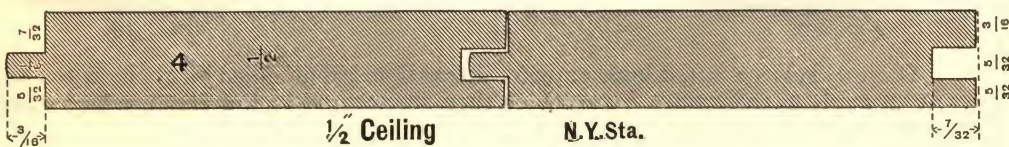
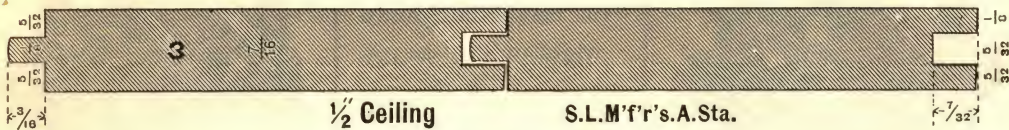
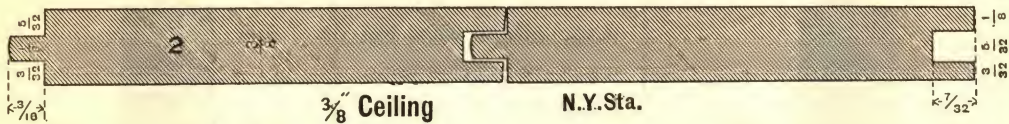
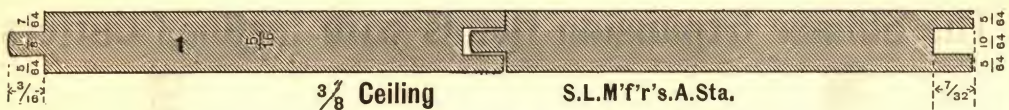


FIG. 37.

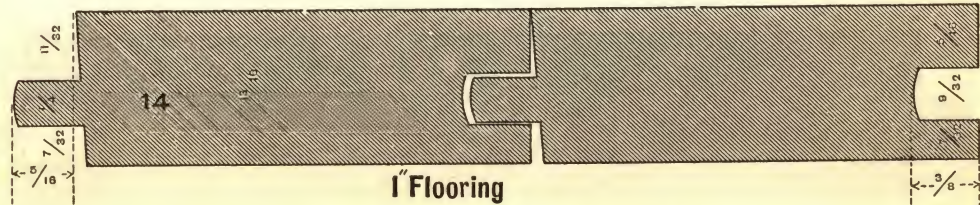
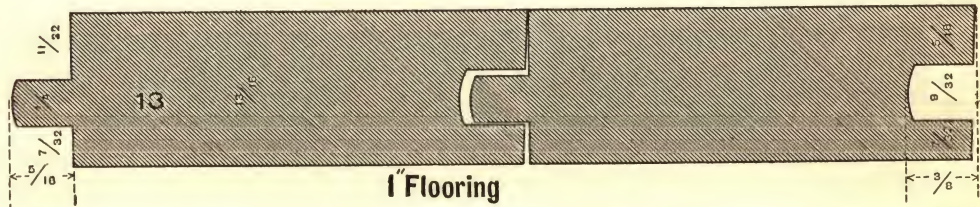
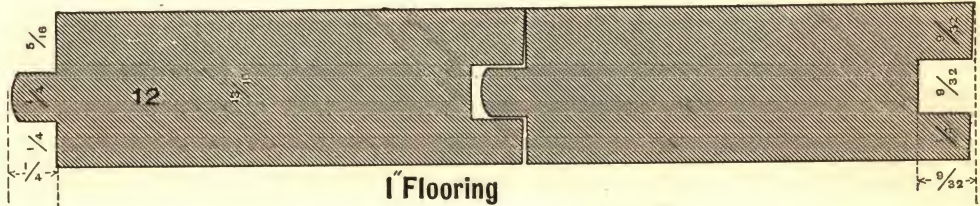
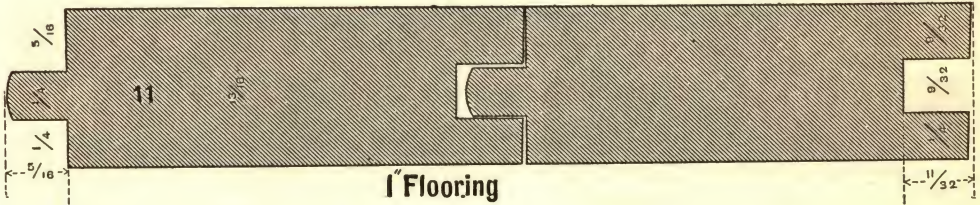
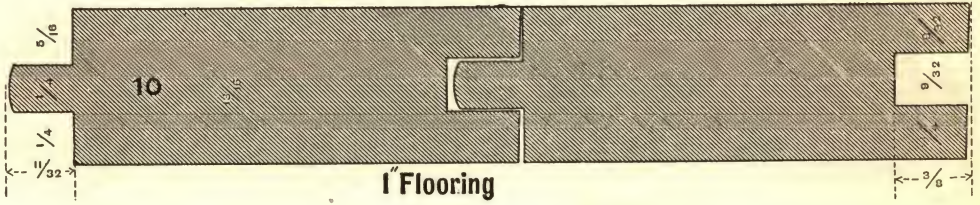
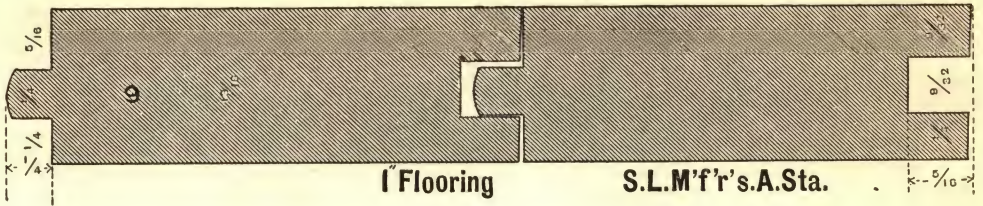
The top section slides freely over the hub of the bottom section, and is adjusted by means of a nut that operates against a spiral spring coiled around the hub on the inside of the Head, between the two sections, which expands the Head when the nut is unscrewed; and the adjustment from 4-4 to 8-4 is quick and accurate and is affected without loosening the Cutters or removing the Head from the Spindle. The adjusting nut is automatically locked by the pressure of the spring upon a serrated joint, and there is no possible chance for the sections to become disarranged when in use, even though the set screw is not drawn up.

Price, Matcher Heads, with Inclined Cutters, per set \$36.00
 " New Bits, per set, (8 pieces) 8.00

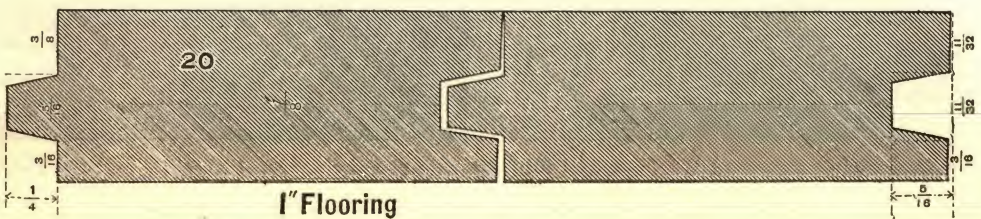
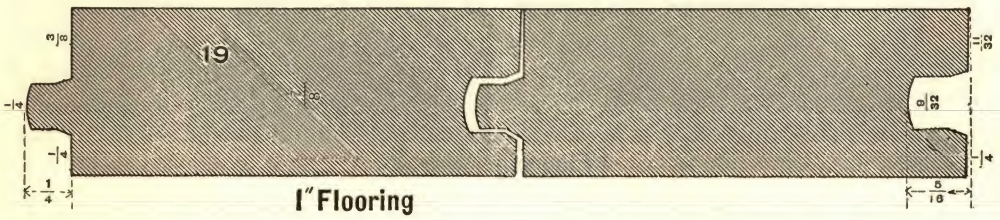
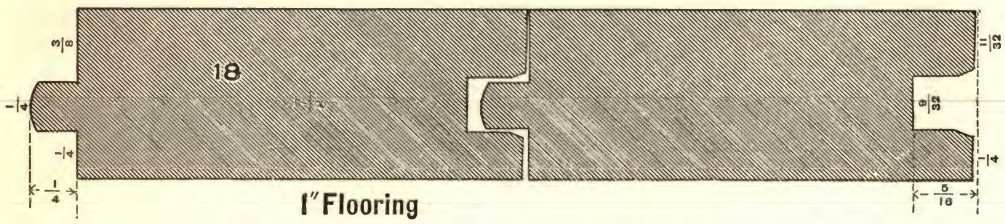
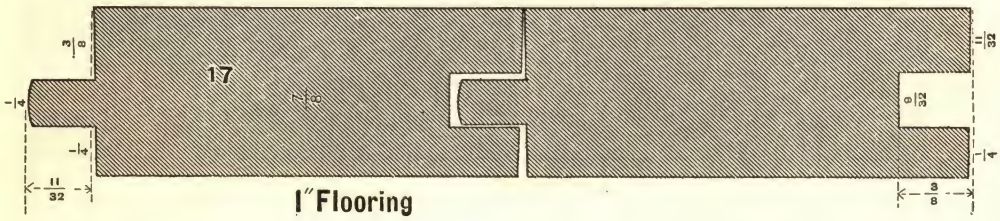
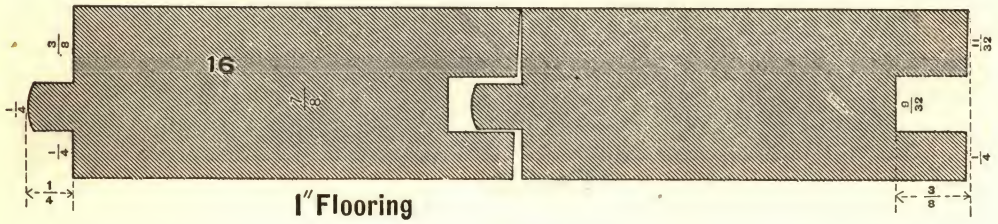
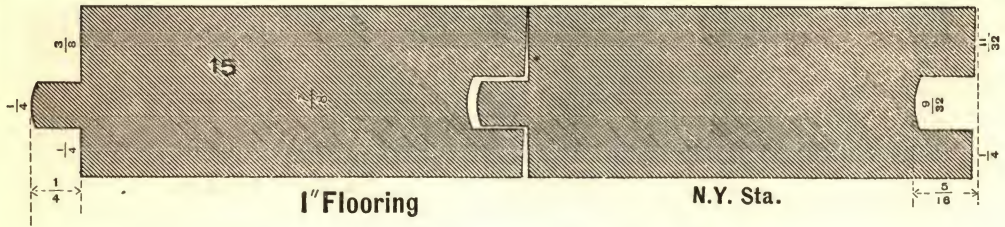
Ceiling & Flooring



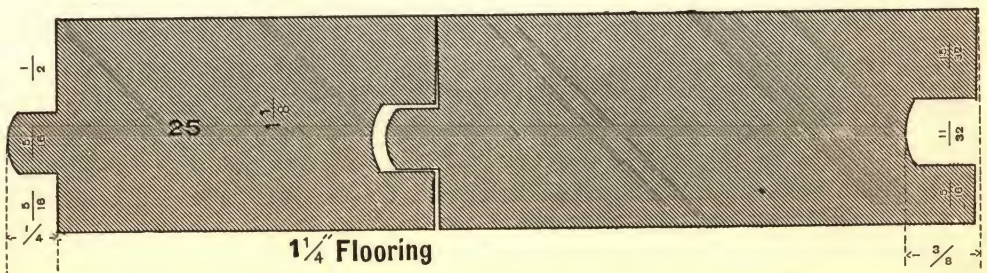
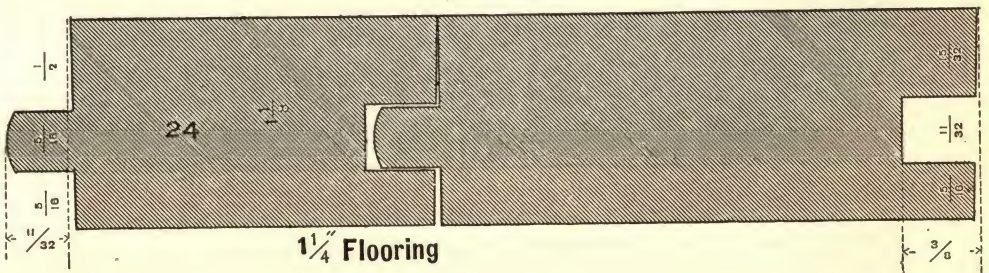
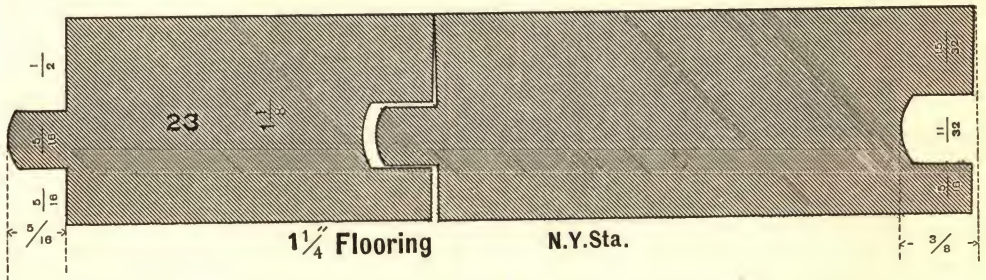
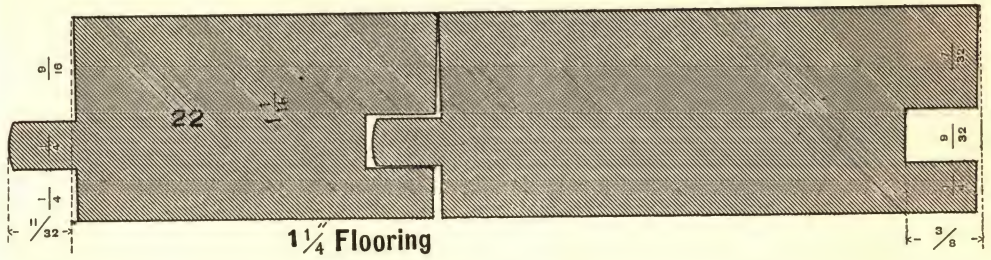
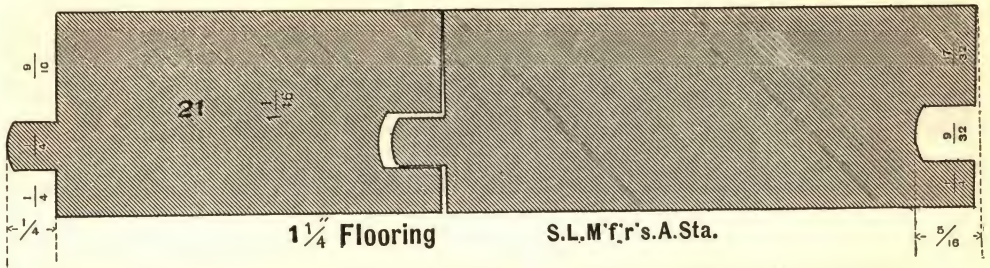
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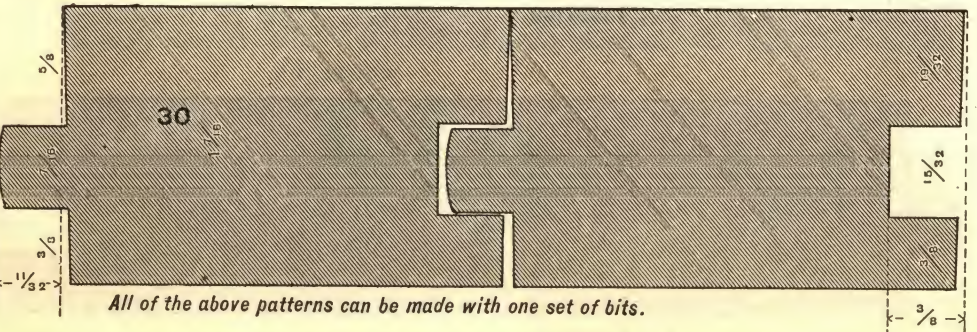
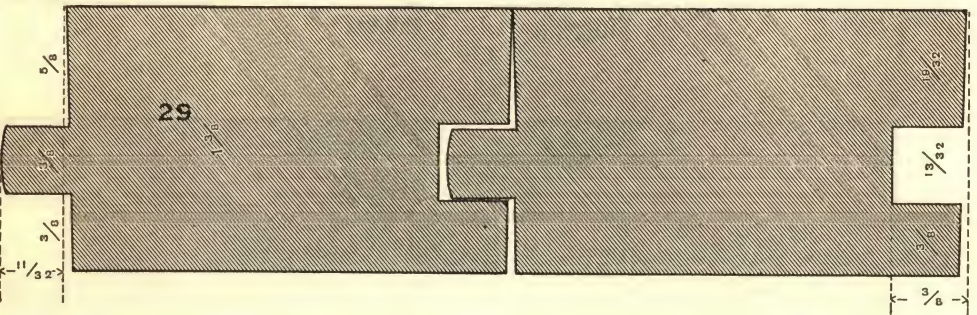
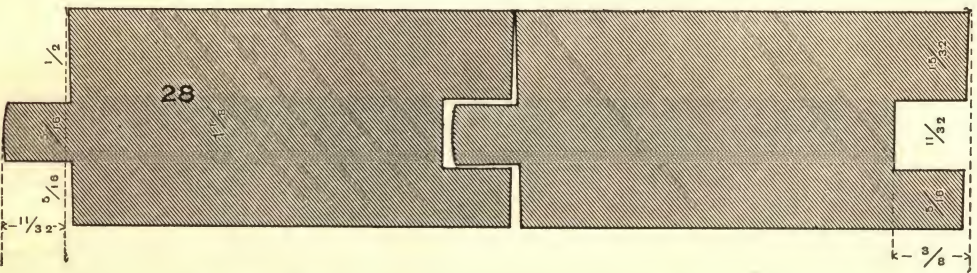
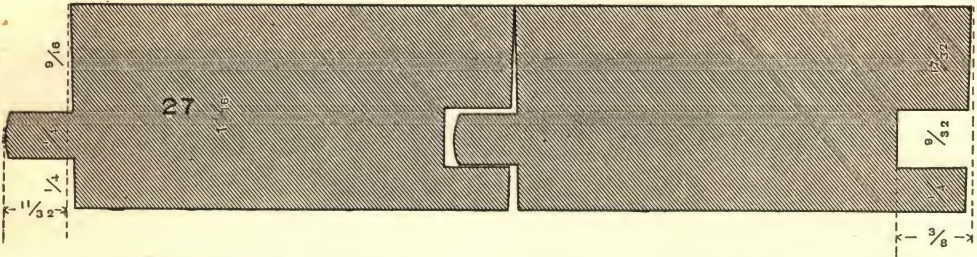
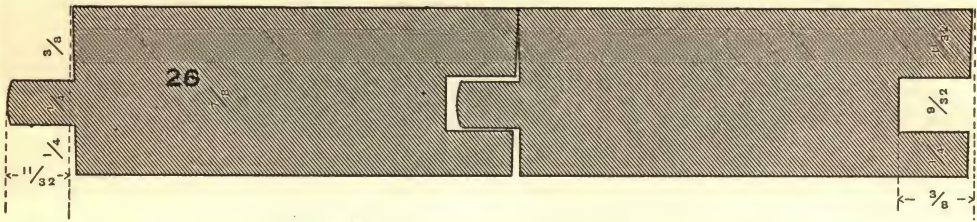
Flooring



Flooring

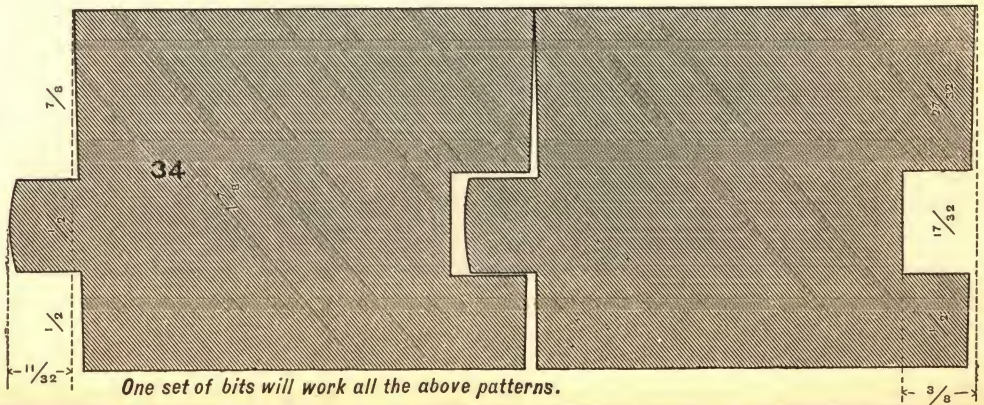
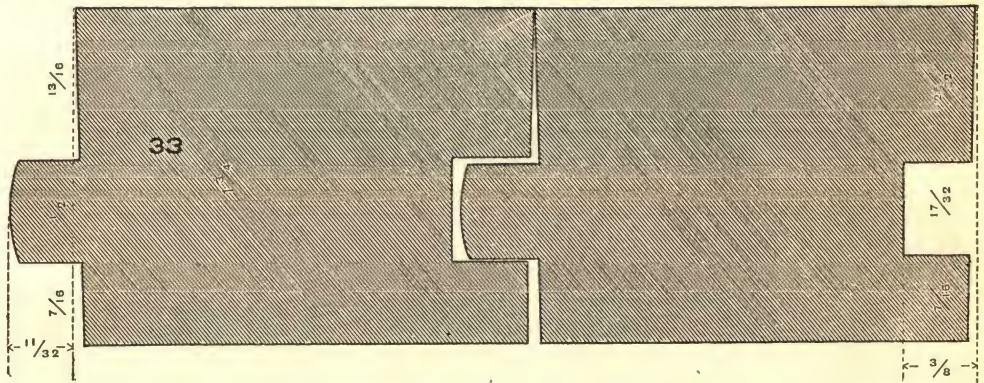
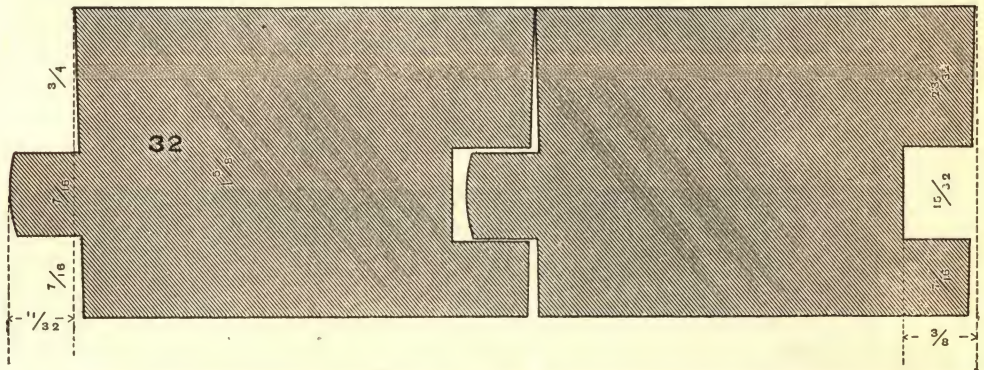
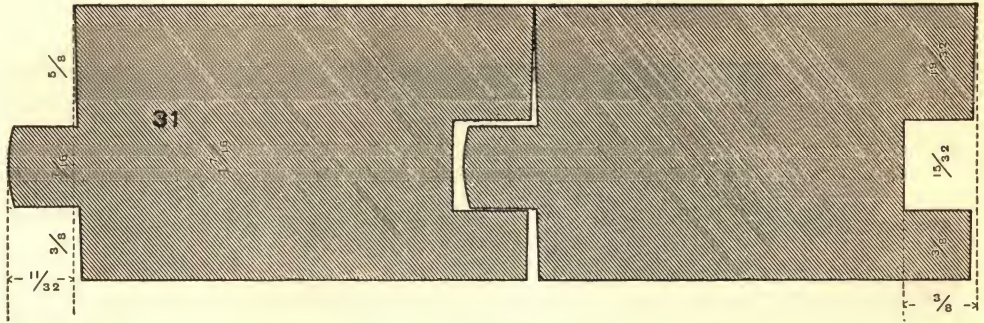


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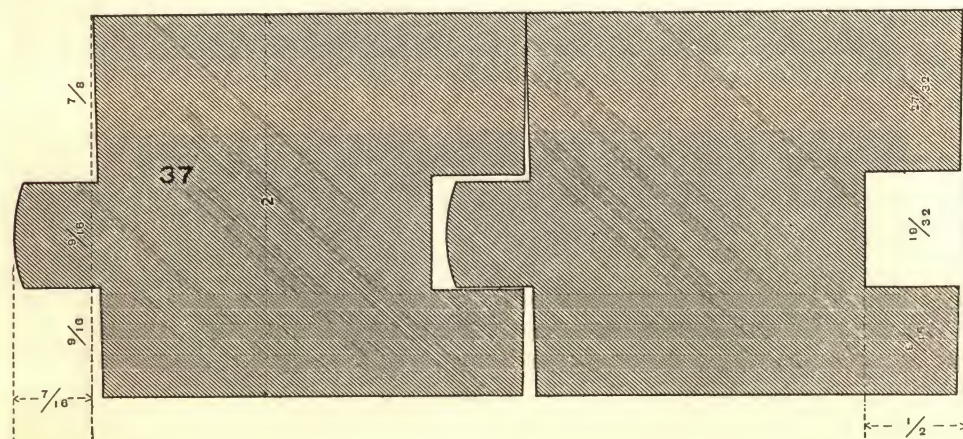
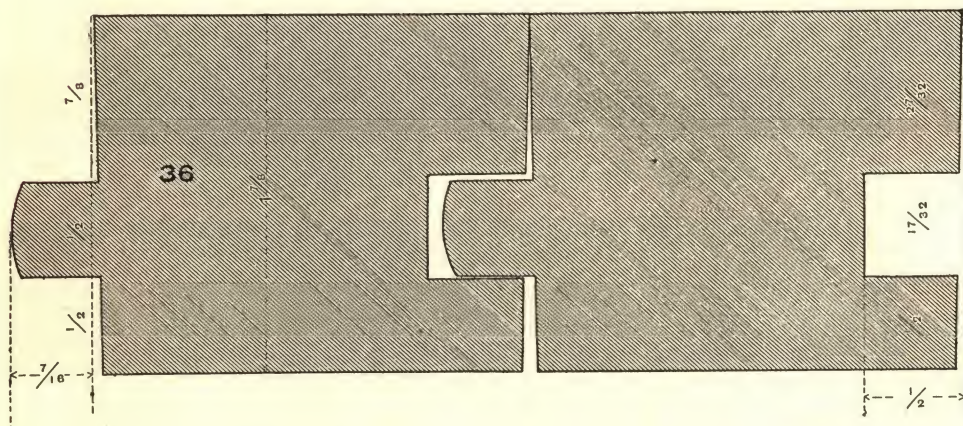
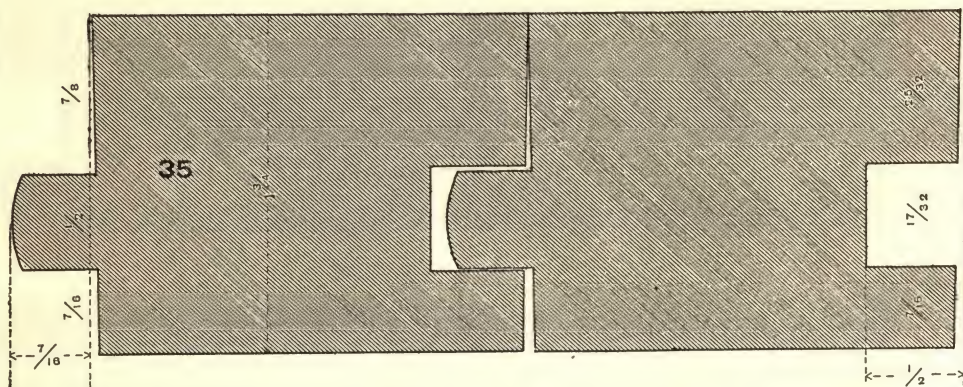
All of the above patterns can be made with one set of bits.

Flooring

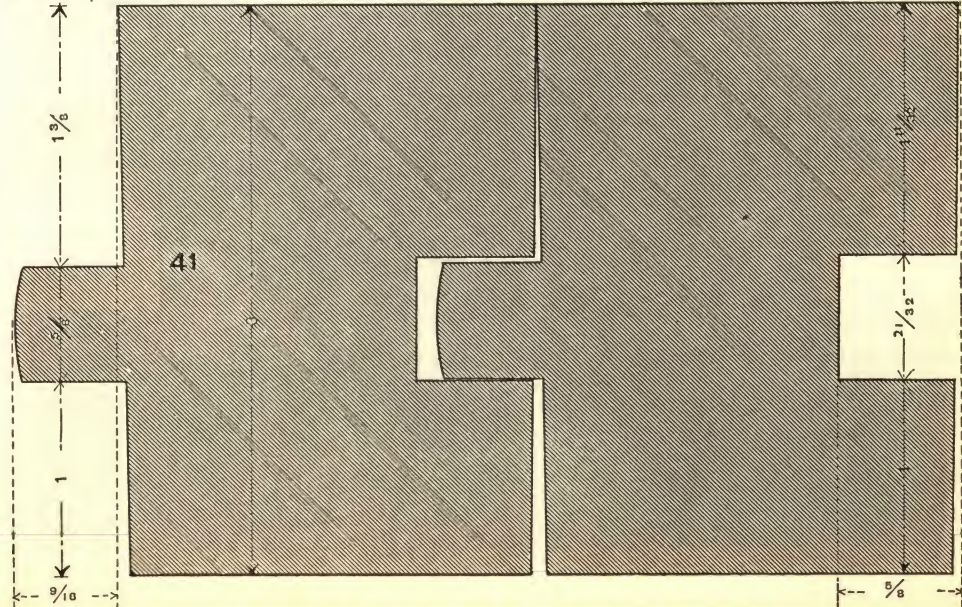
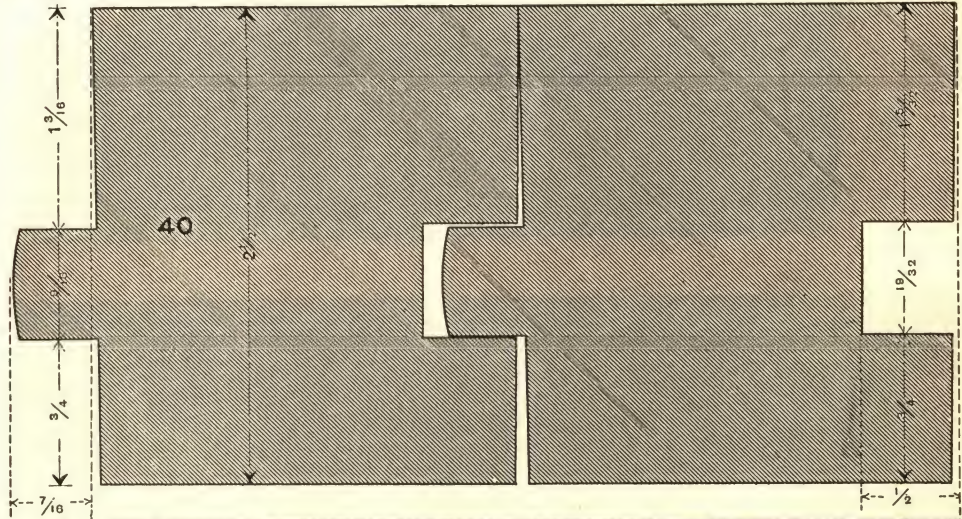
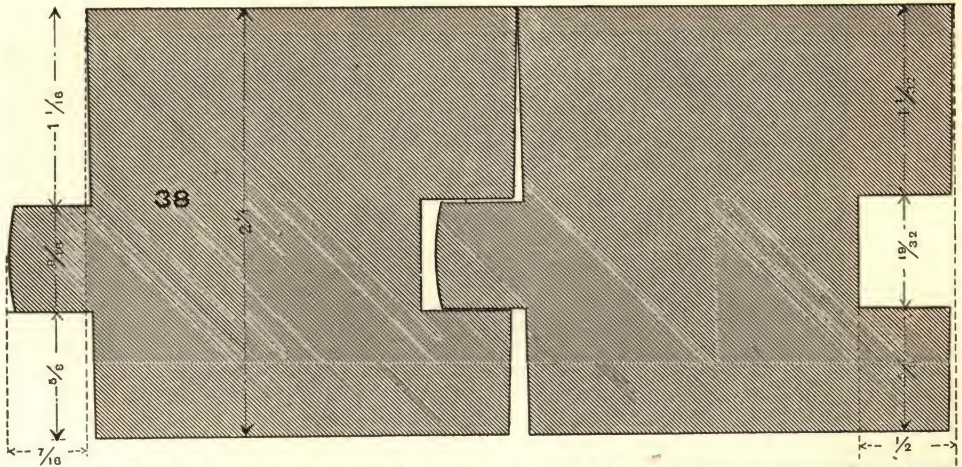


One set of bits will work all the above patterns.

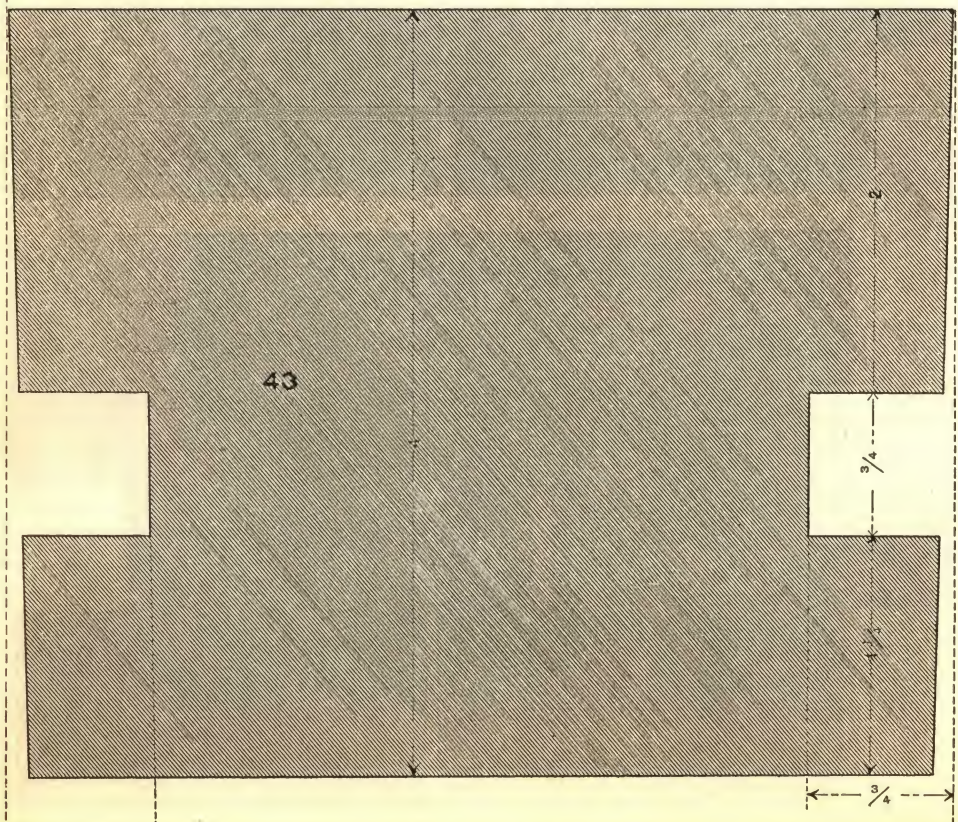
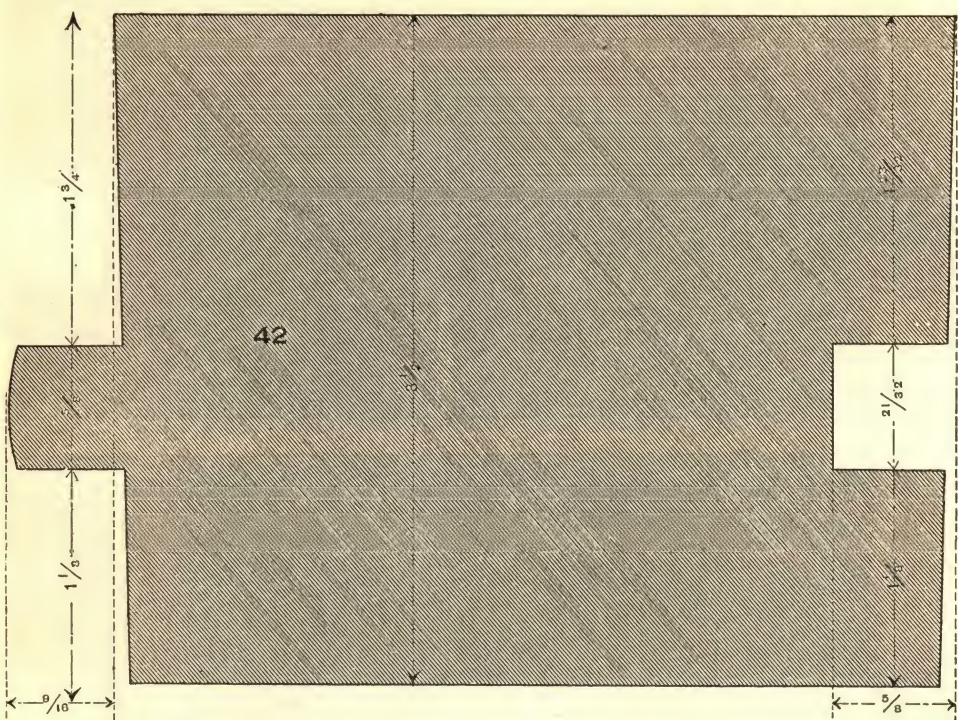
Flooring



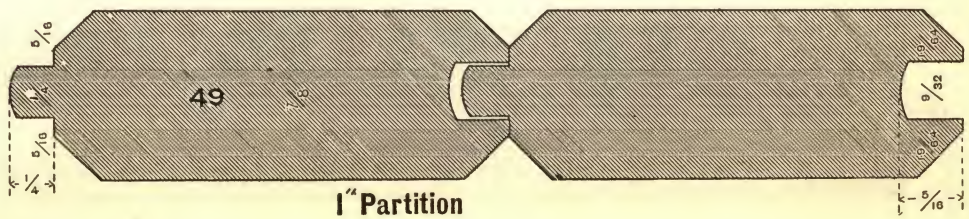
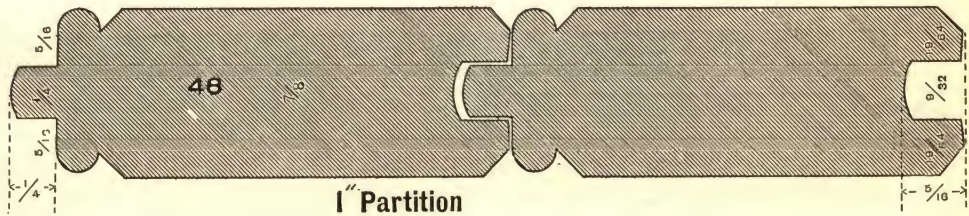
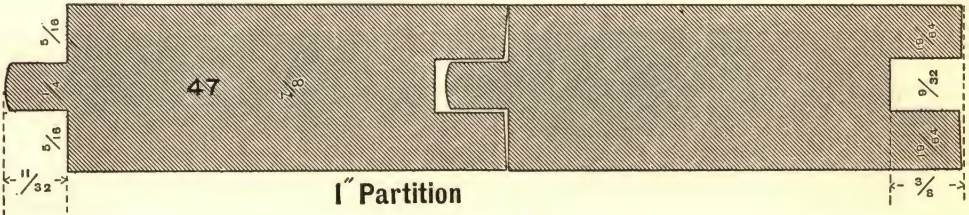
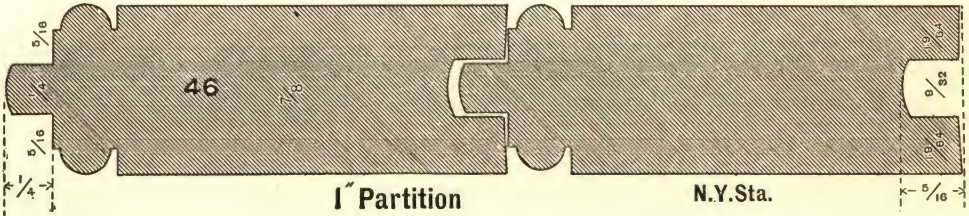
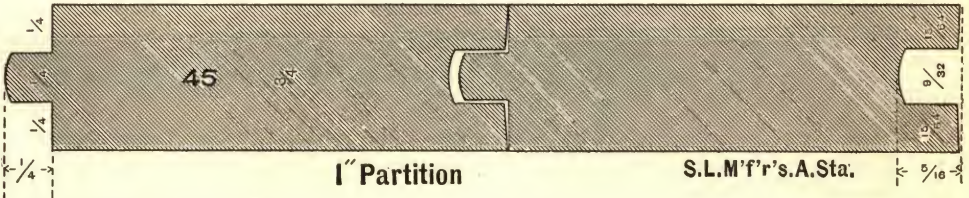
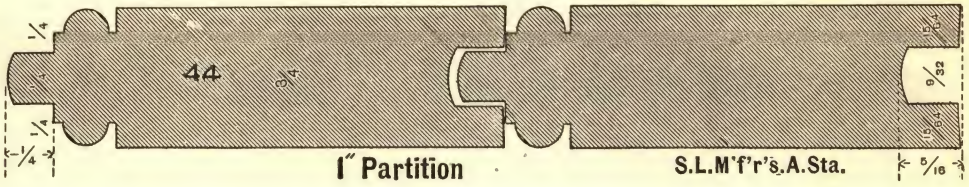
Flooring



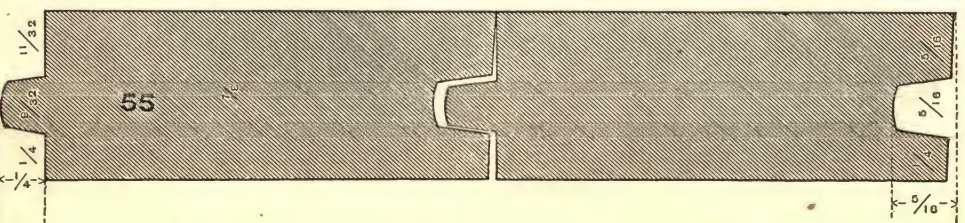
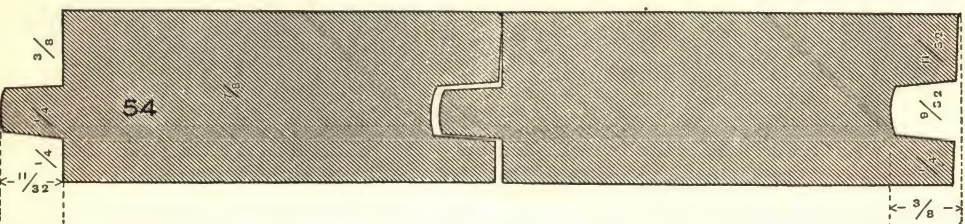
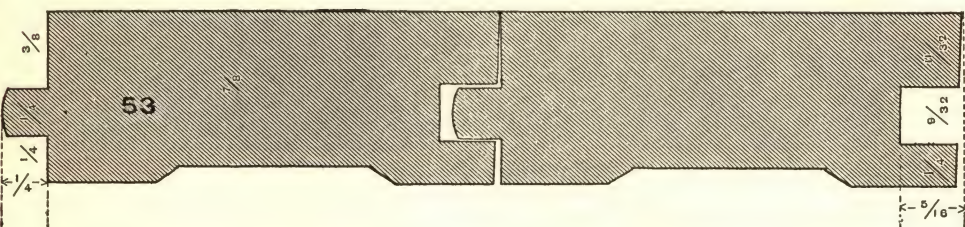
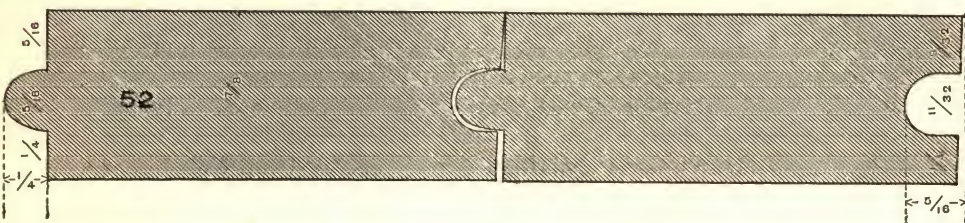
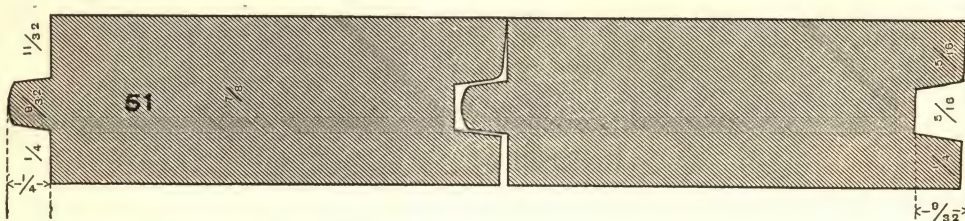
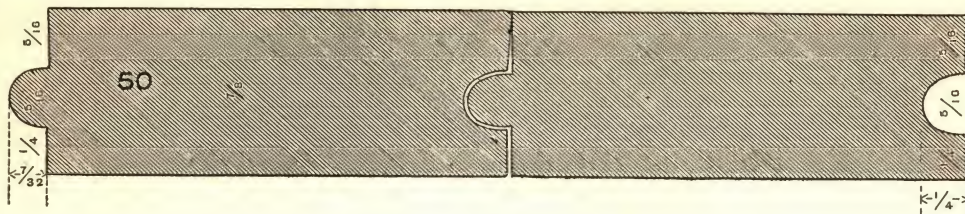
Flooring



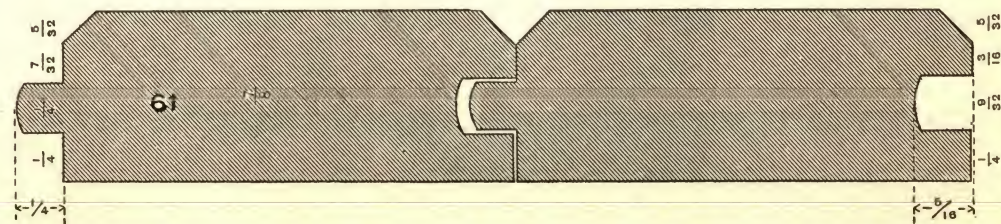
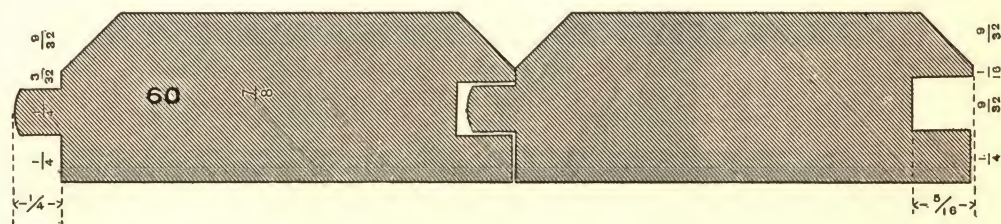
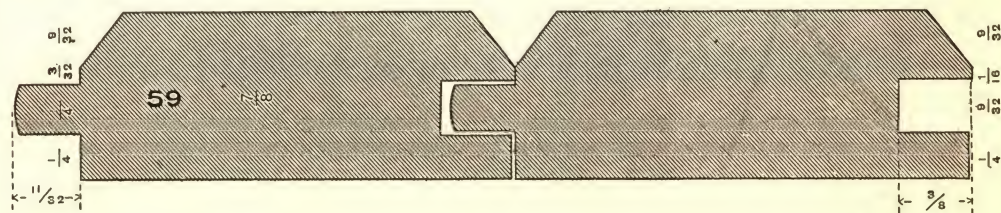
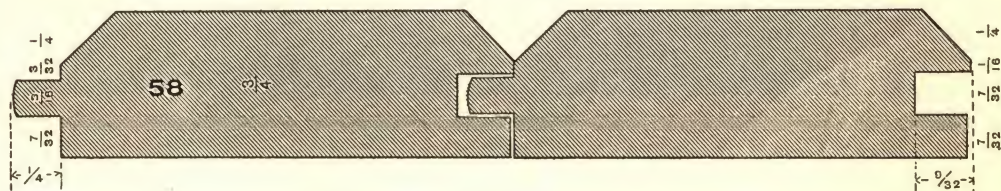
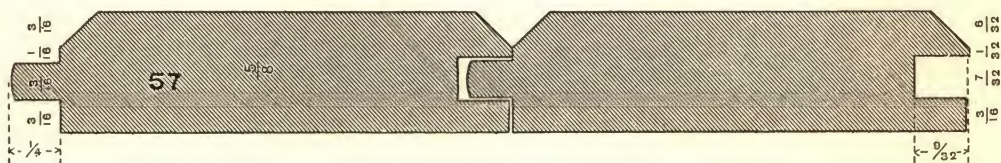
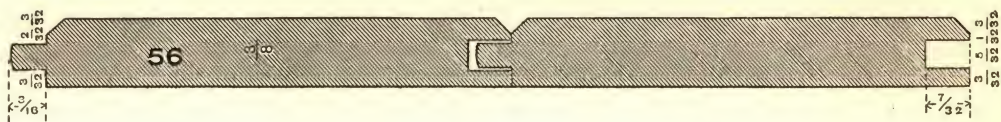
Partition



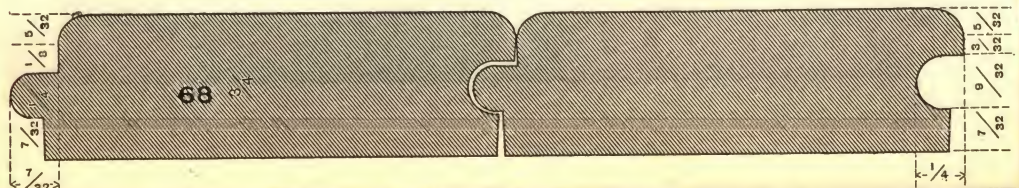
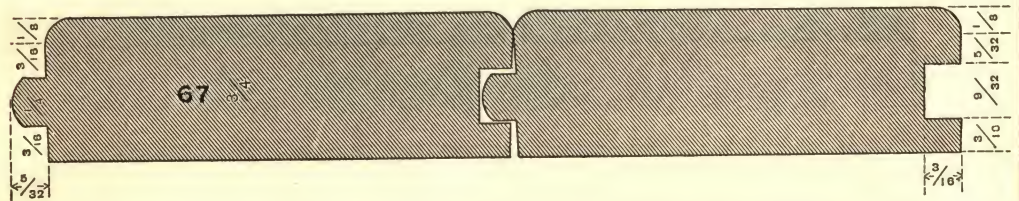
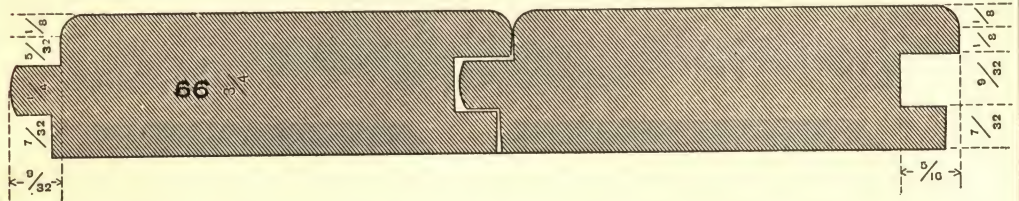
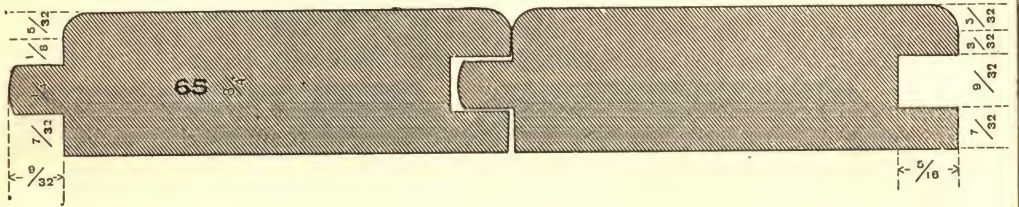
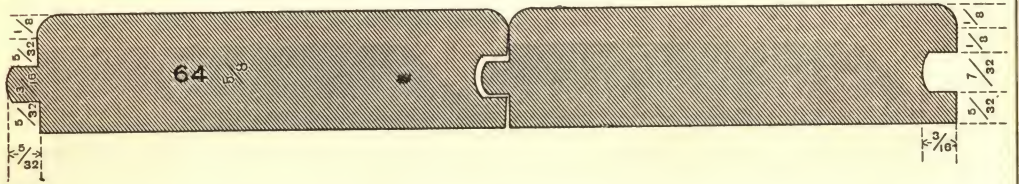
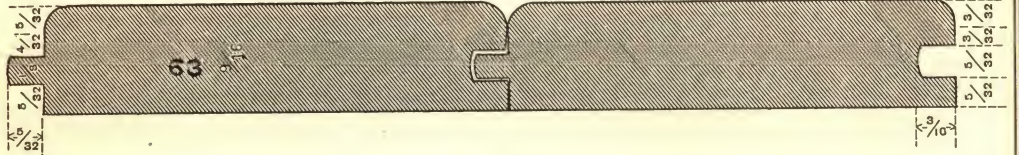
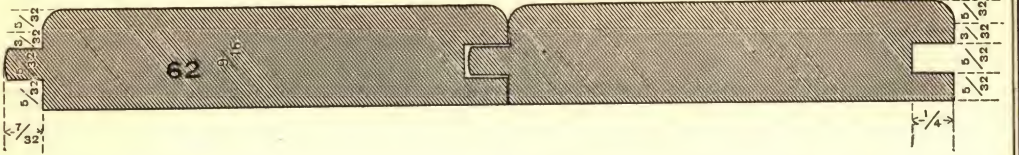
Hard Wood Flooring



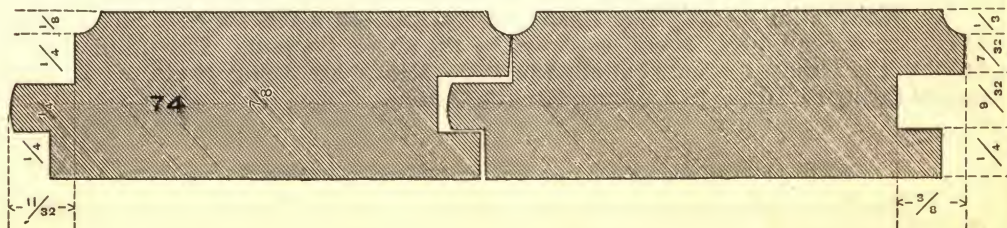
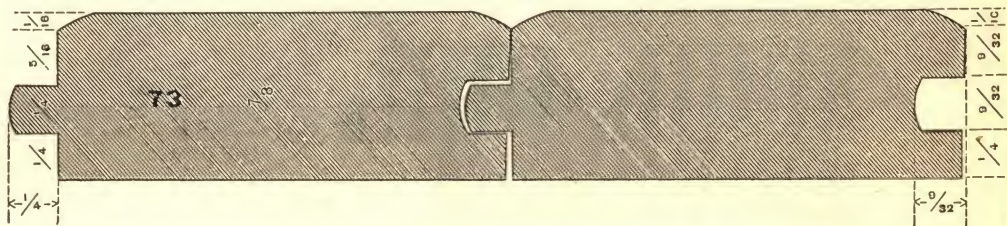
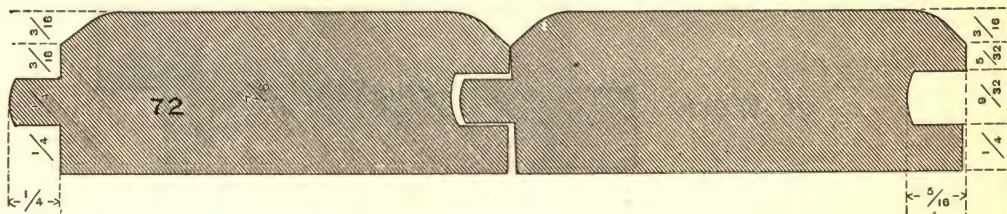
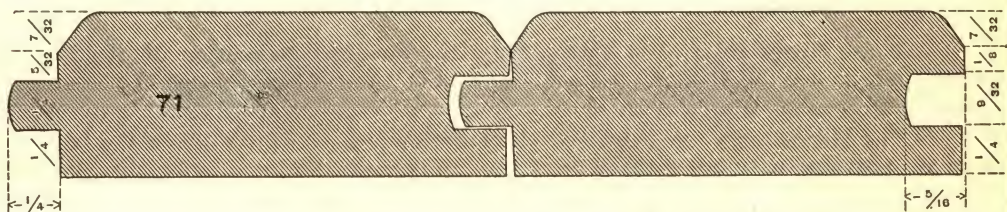
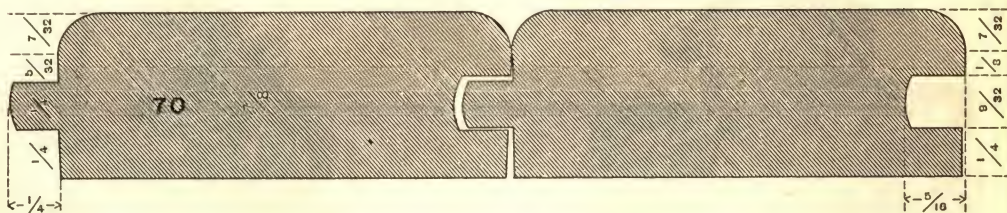
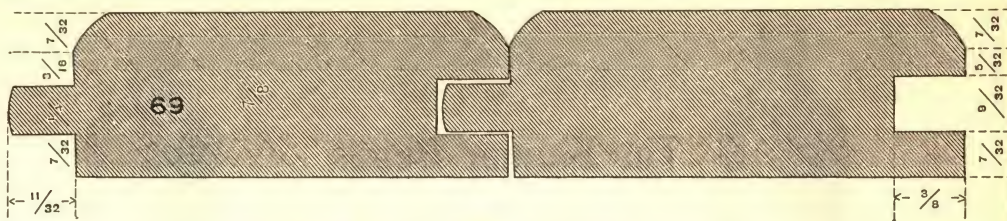
Wainscoting



Car Siding



Car Siding



GUIDE HEAD.

The Shimer Heads for Ship Lap.

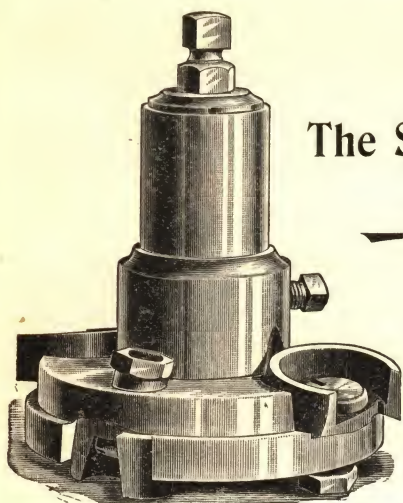


FIG. 38.

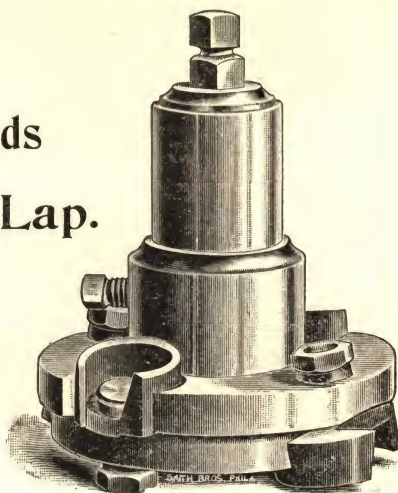


FIG. 39.

These Heads are greatly improved by the outward inclination of the Bit seats, which determines the diamond point to the lead of the cut and locates the holding nut nearer the head centre.

The Heads carry our improved bit centering seats concaved about the bolt holes, and are provided with our locking device to the bolt, for the holding of the Bit between two fixed surfaces. The Bits work upon the "draw cut" principle and are provided with all the latest improvements.

Diagram of Work.

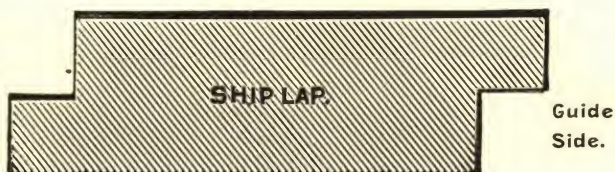


FIG. 40.

Price, Ship Lap Heads, complete	\$36.00
" New Bits, per set, (8)	12.00

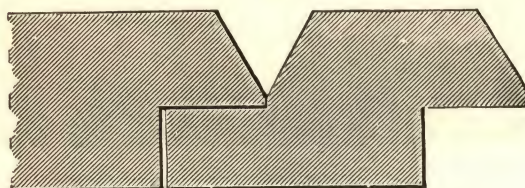


FIG. 41.

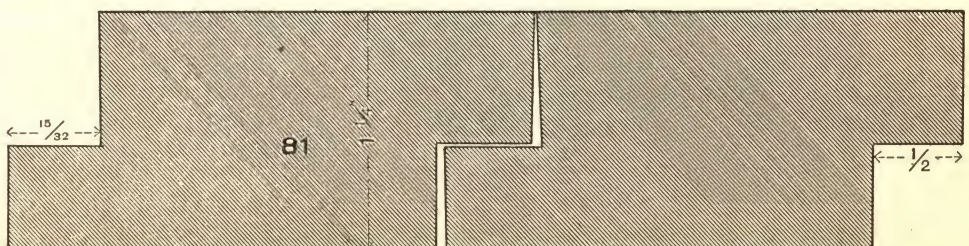
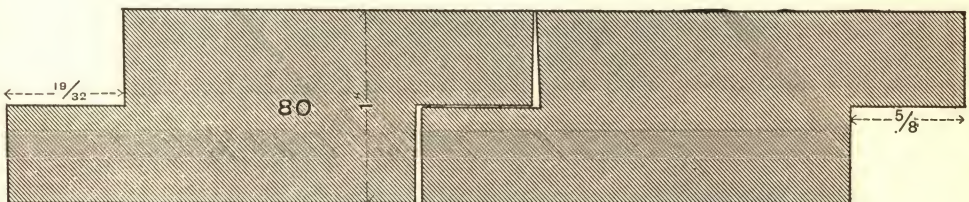
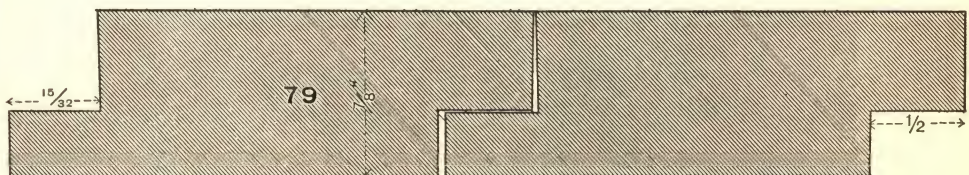
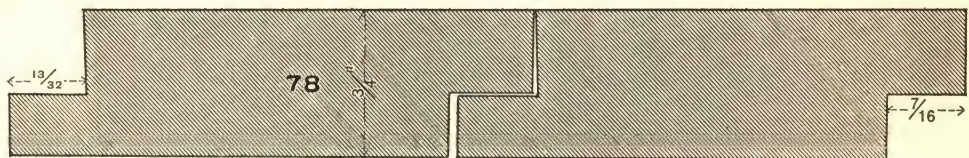
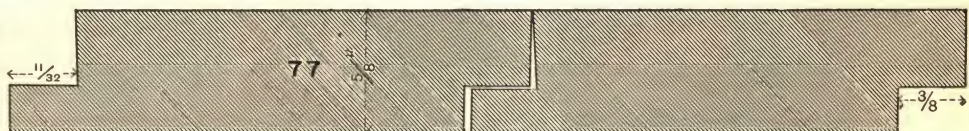
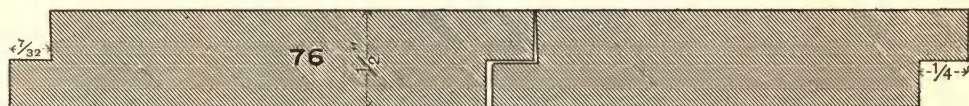
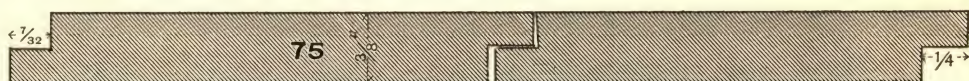
This is preferably the
Guide Side.

Wainscoting on Ship Lap Heads requires two extra Bits for each Ship Lap Head to cut the upper edge of board, as shown by the above diagram. These Bits should be fitted to the Heads, if wanted at all, when the Heads are being made, as it requires special fitting of Heads to accommodate the Cutters.

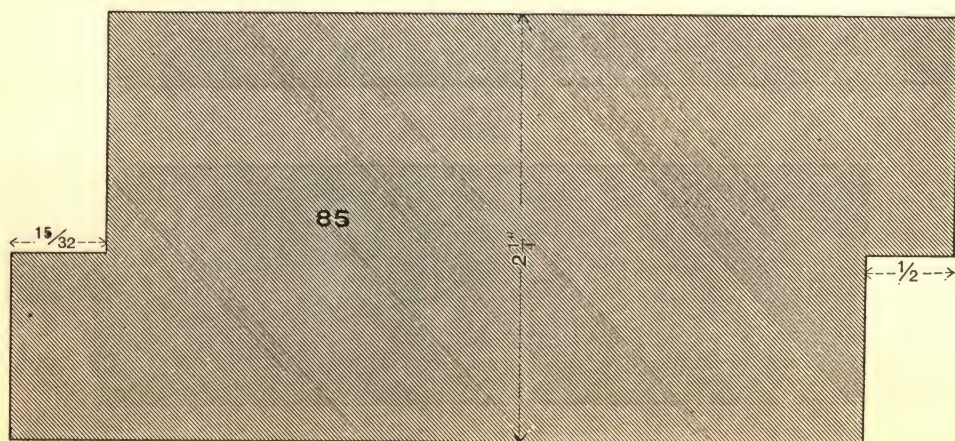
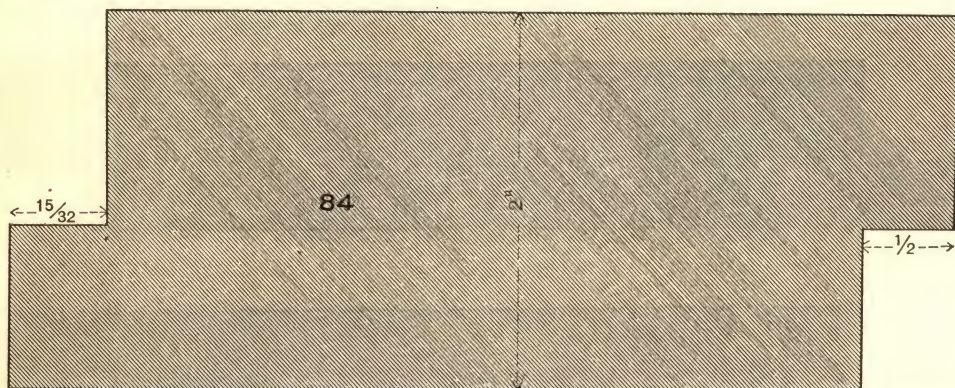
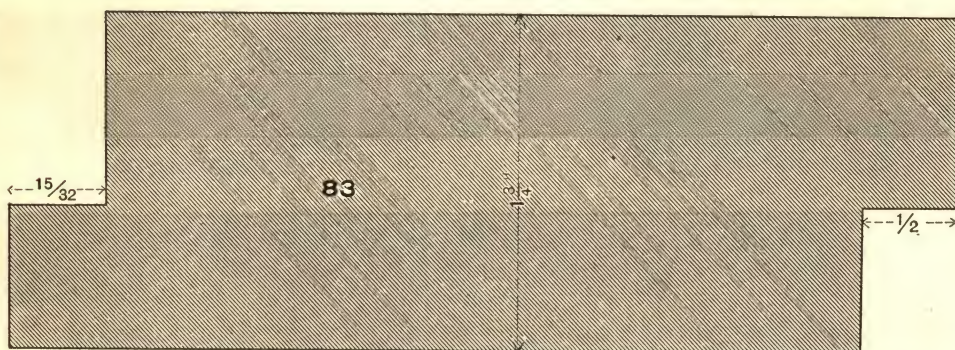
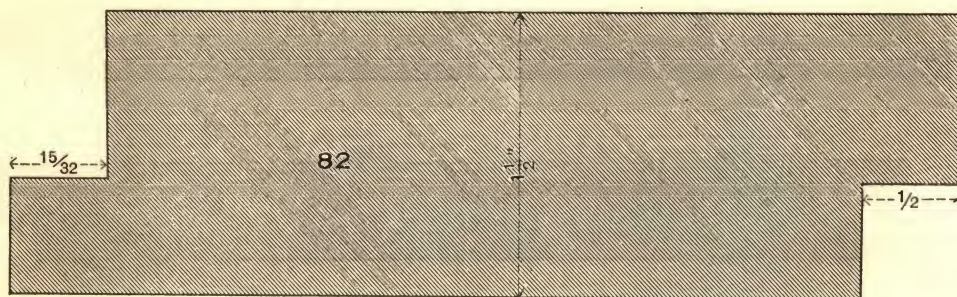
Price, 4 Bits	\$ 8.00
" Heads, complete	38.00

Bits for regular tongue and groove matching will not apply to these Heads. On the following pages will be found some of the patterns we are making.

Ship - Lap



Ship - Lap



Tongue Head.

Groove Head.

The Shimer Heads

for Double Ceiling.

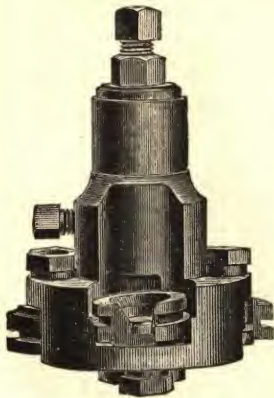


FIG. 42.

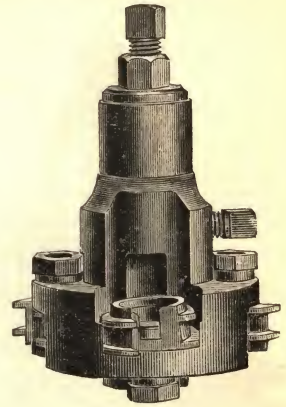


FIG. 43.

DIAGRAM OF WORK.

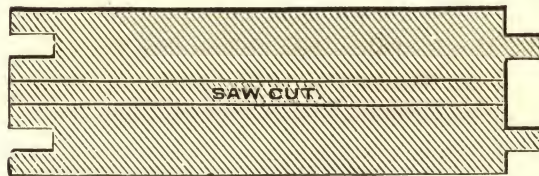


FIG. 44.

The practice of matching 1 and 1 $\frac{1}{4}$ inch double thickness, for $\frac{3}{8}$ or $\frac{5}{8}$ ceiling, as illustrated herewith, has become very general, and is successfully accomplished. The stock, as will be seen, is run with two Tongues on one edge, and two Grooves on the other edge of the board and is re-sawed afterwards, as shown by diagram above, finishing two boards at once, and thereby

Doubling the Capacity of Any Matcher.

These Heads are made especially for matching Ceiling in double thickness, with Bits that overlap the space between the groove lines of upper and lower cut; that is, the upper series of Bits cut into the lower groove, and the lower series of Bits cut into the upper groove, breaking the chip, and working with **perfect side clearance to the points that lead the cut**, as fully illustrated by diagram, Fig. 3, page 7. Bits for single matching will not apply to these Heads, because of the overlap above referred to.

Heads for matching both Double $\frac{3}{8}$ and Double $\frac{5}{8}$ will require two sets of Bits.

Price, per set, complete	\$38.00
" Bits per set (8)	14.00

This is the old style of Heads for Double Ceiling, and requires very careful re-sawing. On the following page we illustrate another style and plans to help the sawyer in his work of dividing the board accurately.

The Shimer Heads for Double Ceiling.

(FIG. 2.)

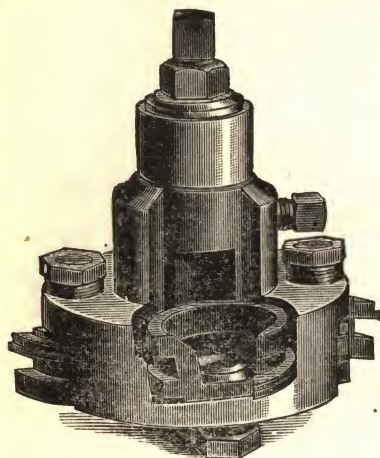


FIG. 45.

*Read
all of
this
page.*

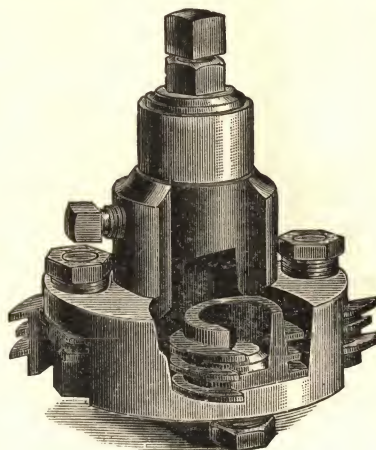


FIG. 46.

When you order Heads of this class, follow directions given on page 5, or give us the record number of the Shimer Heads you are using on your Matcher. We can get at the sizes from the record by having the number you find stamped on the Head. This diagram represents Double $\frac{5}{8}$ Ceiling.

DIAGRAM OF WORK.

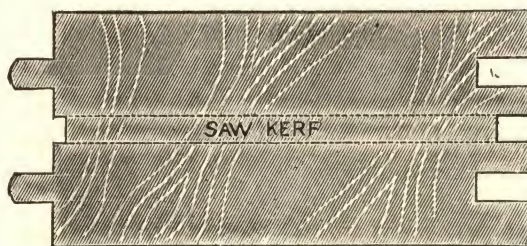


FIG. 47.

To make Double $\frac{3}{8}$ Ceiling, a set of special Bits will be required.

These Heads match Double Ceiling with two grooves along one edge of strips, and two tongues along the other edge, with, half way between and on line of saw-cut, a *dividing line* cut about $\frac{1}{8}$ of an inch deep along each edge.

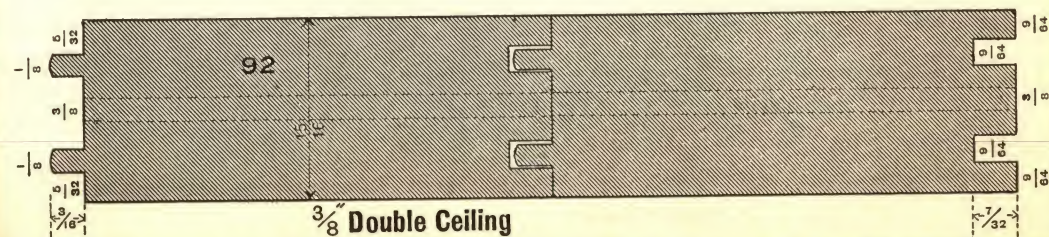
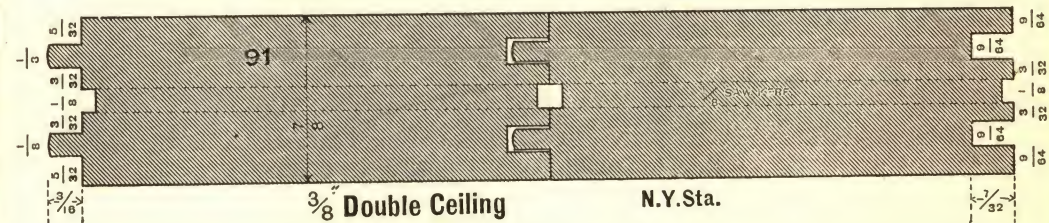
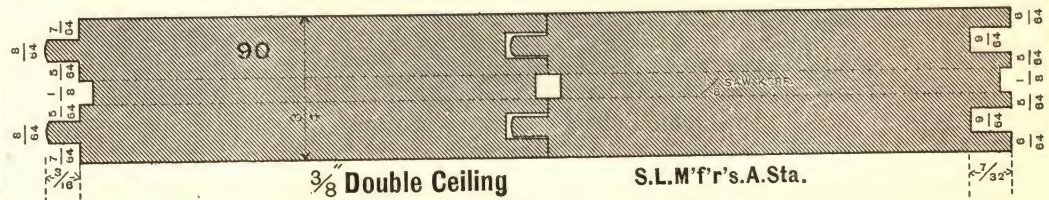
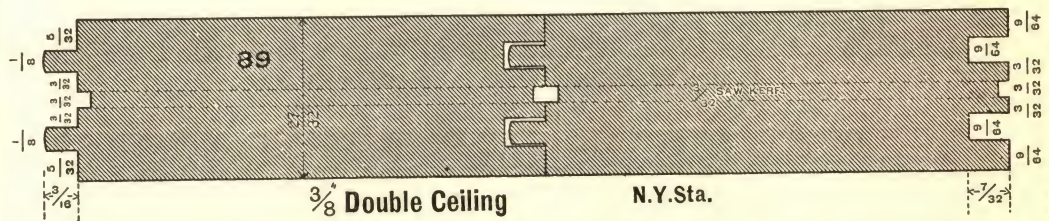
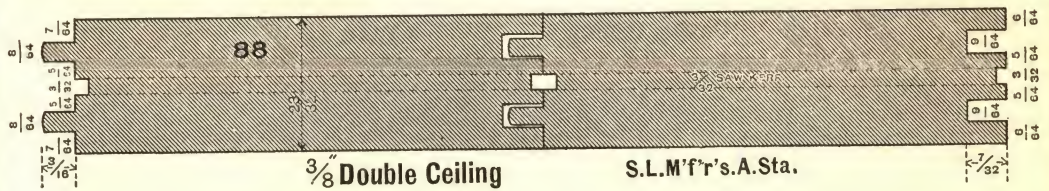
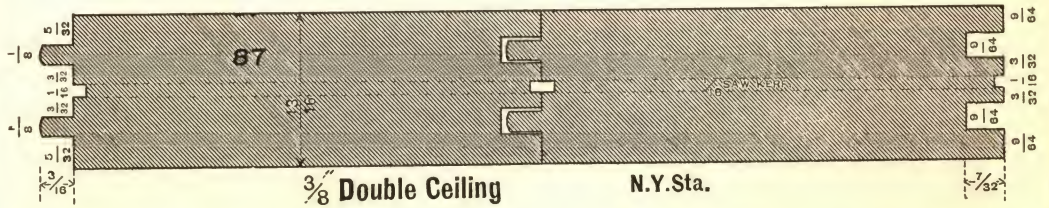
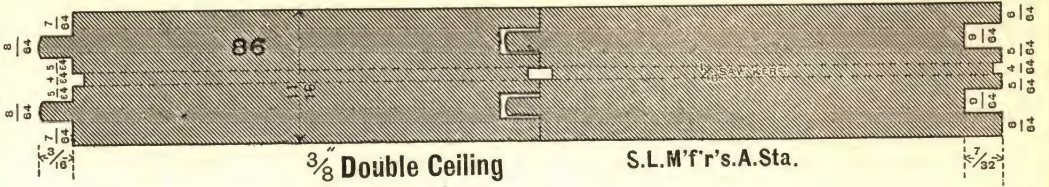
This mark becomes a guide to the eye of the sawyer, who can at once detect the least variation of the saw, and correct it as the board is passing through.

Two strips of like thickness are thus produced—otherwise difficult to do, as the eye cannot determine the half way distance between the tongues without *the mark*.

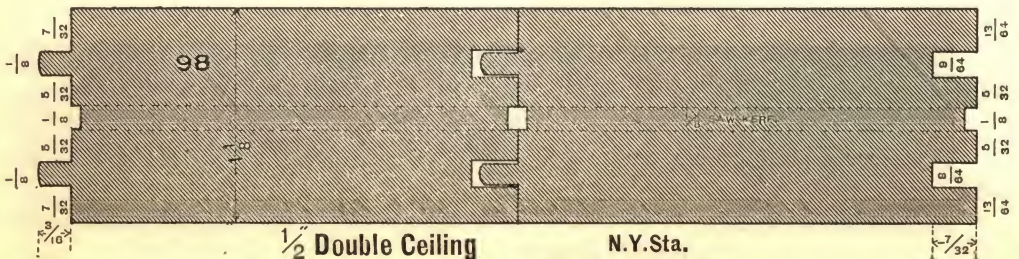
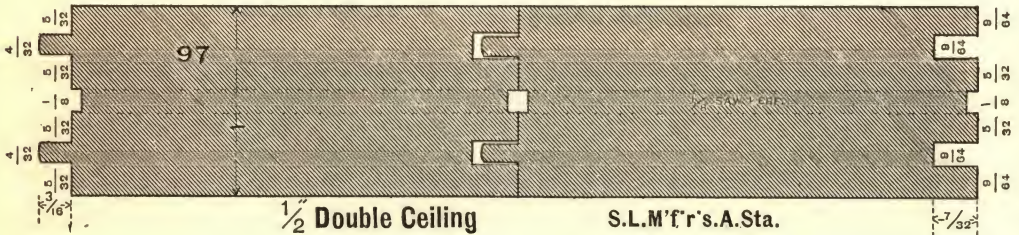
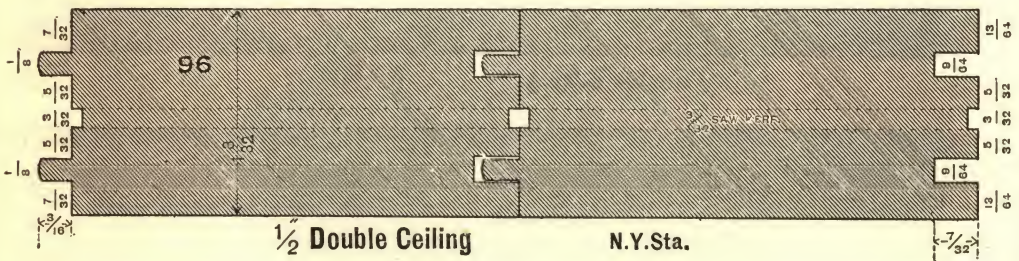
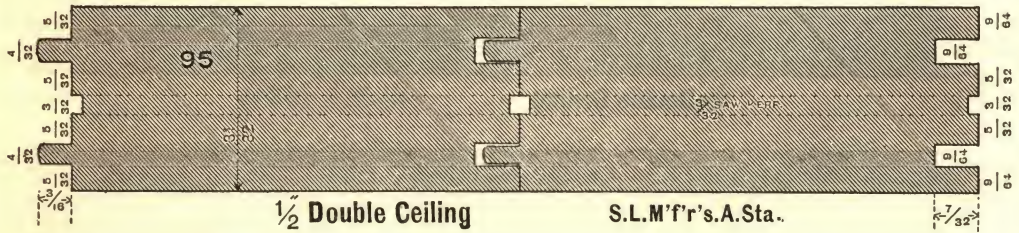
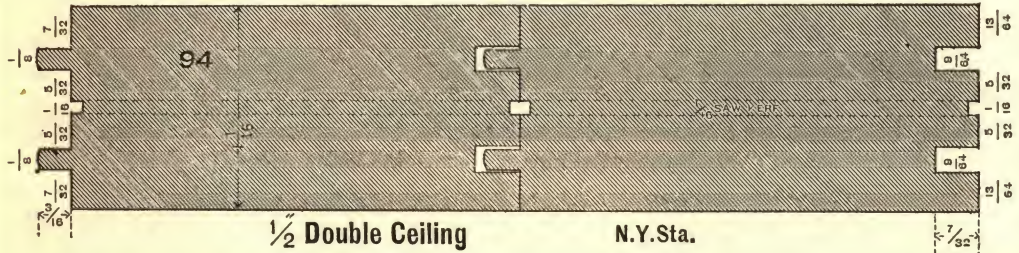
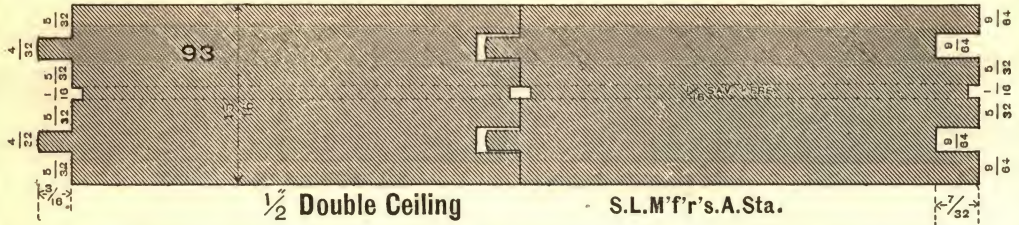
We advise this style, with the tongues along one edge, and dividing mark between, especially when the strips are beaded.

Price, Double Ceiling Heads, per set	\$38.00
" New Bits, per set, (8)	14.00

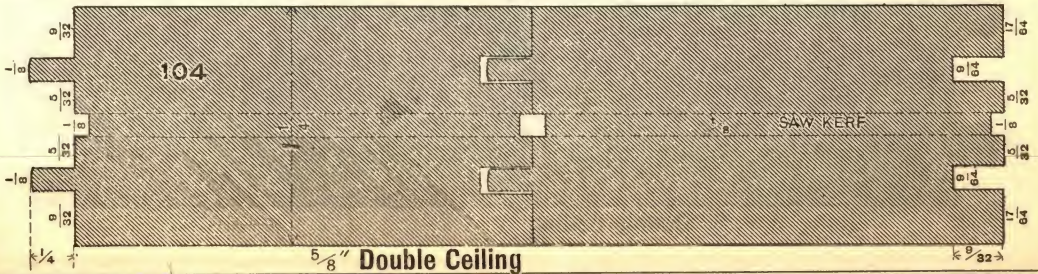
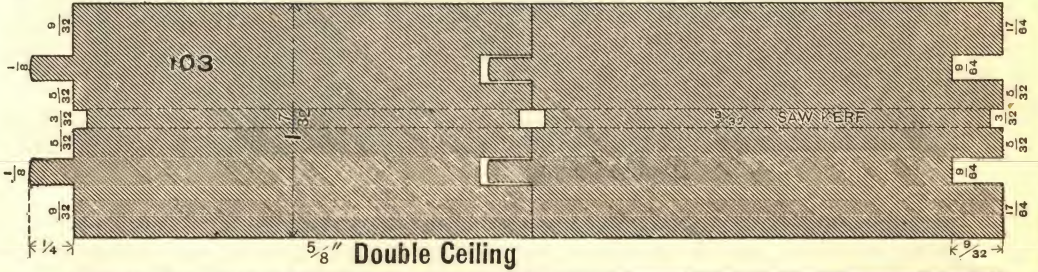
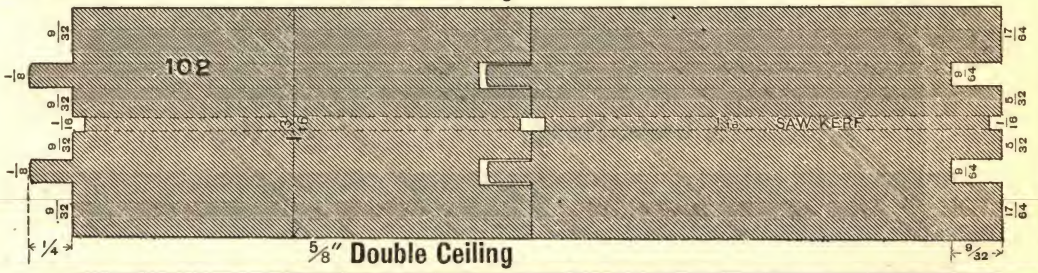
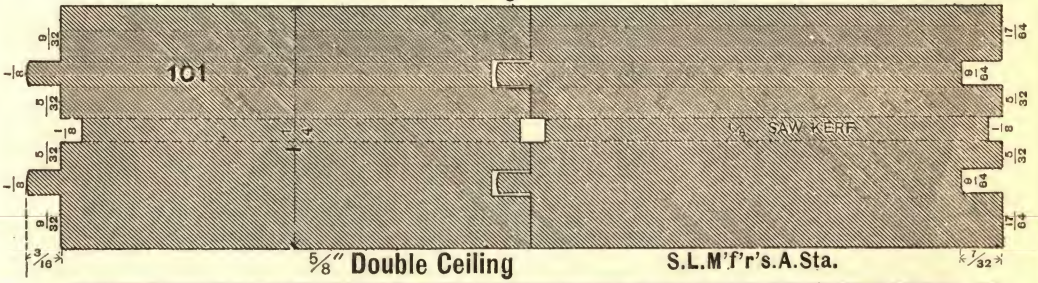
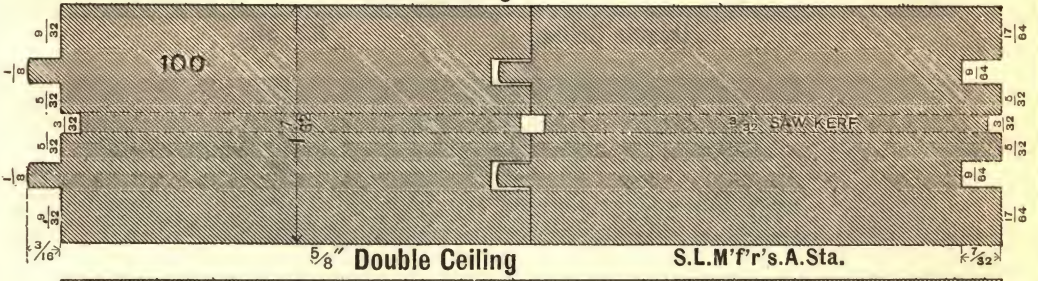
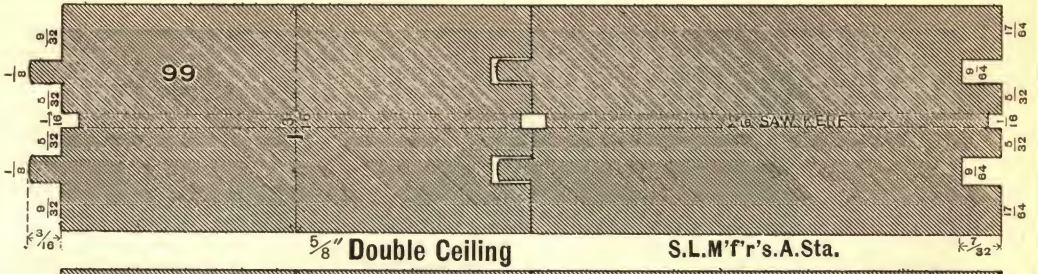
Double Ceiling



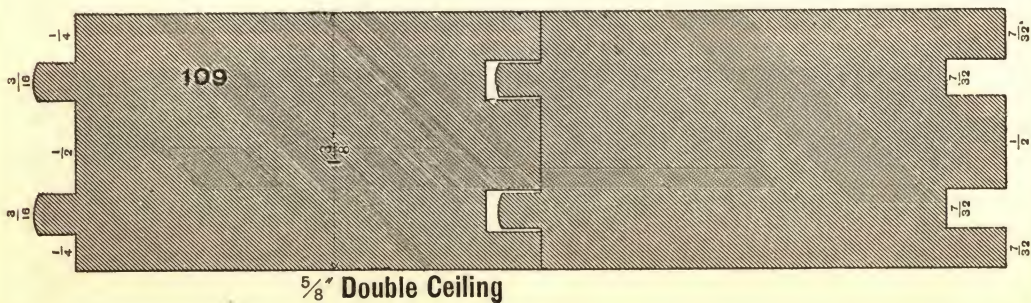
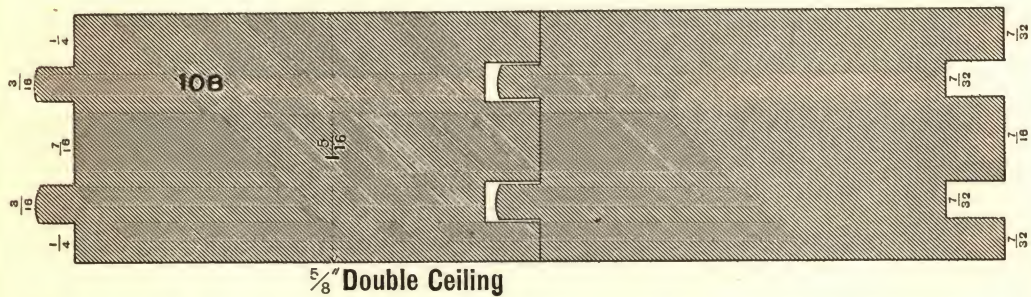
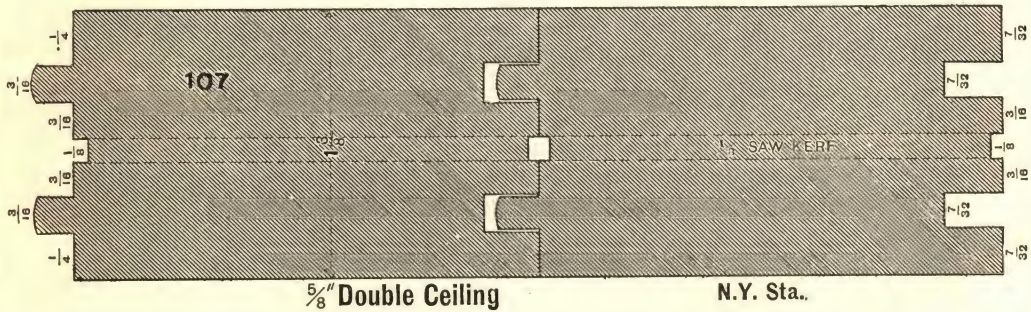
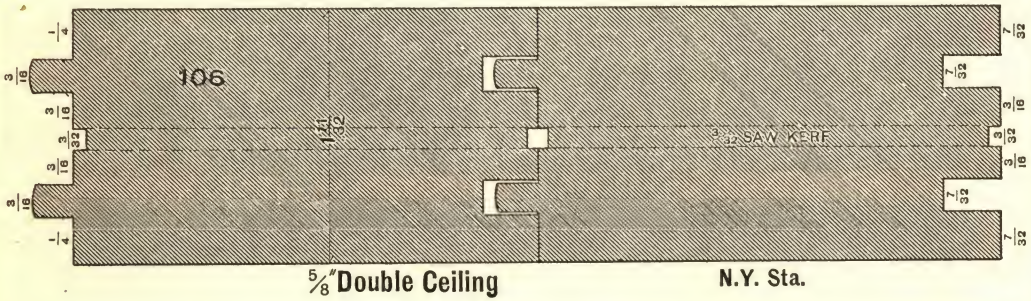
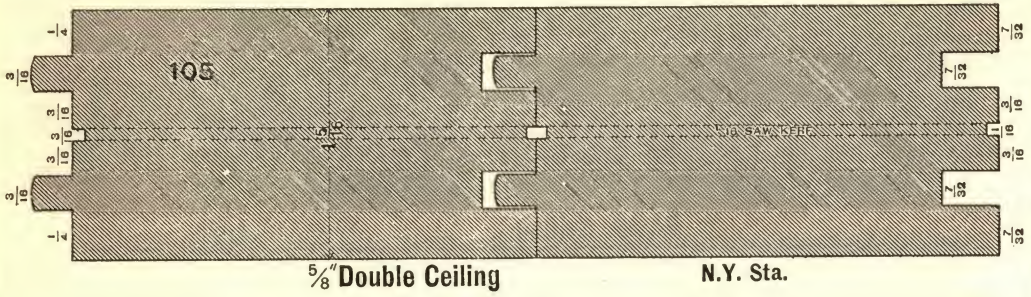
Double Ceiling



Double Ceiling



Double Ceiling





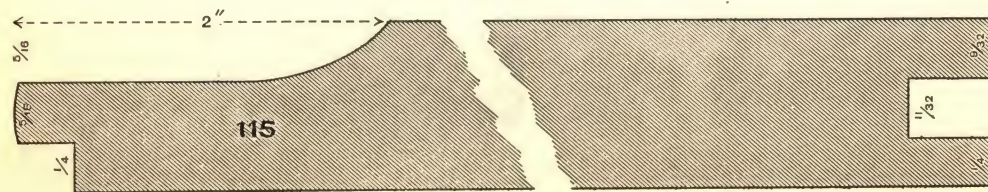
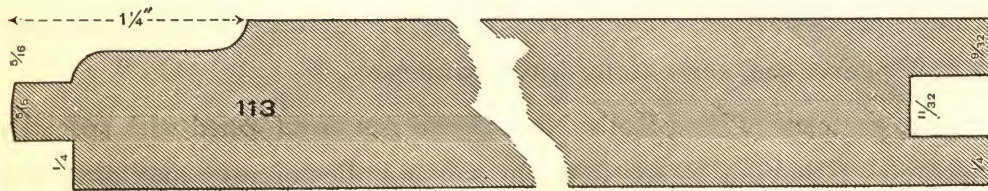
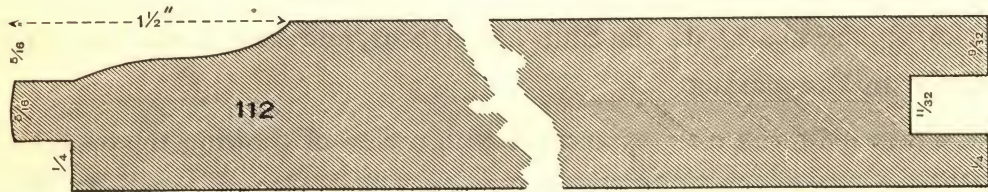
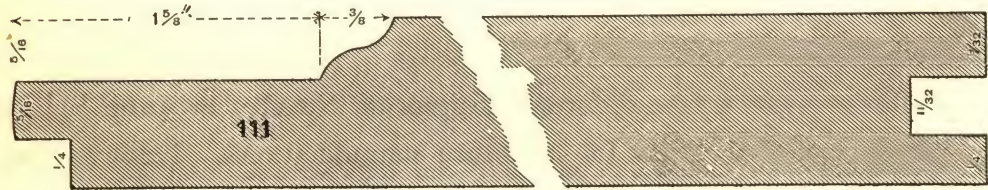
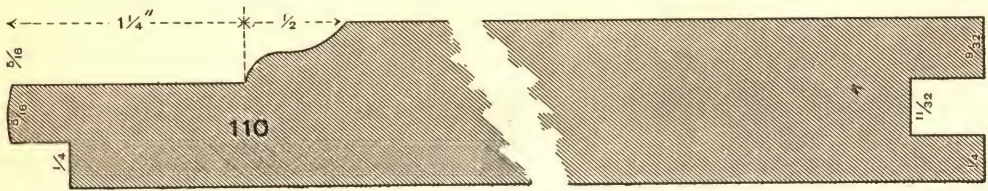
Following are a few different designs of Novelty or Drop Siding, also patterns of Bed Rails for furniture manufacturers. Patterns Nos. 110 to 121 are made with the Shimer Matcher Heads, except the upper carve, which is done with knives from the upper cylinder. Patterns Nos. 121 to 133 are made with the Ship Lap Heads, and knives on the upper cylinder in like manner.

These patterns are represented with a view of showing the operators of Shimer Cutter Heads the various uses to which they are applied. The Side Heads work all but that part of the cut enclosed in dotted lines, without special cutters. The knives fitting the cylinder are shaped to suit the upper carve and serve to form the variations.

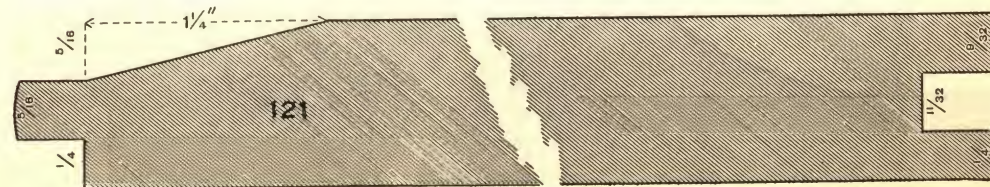
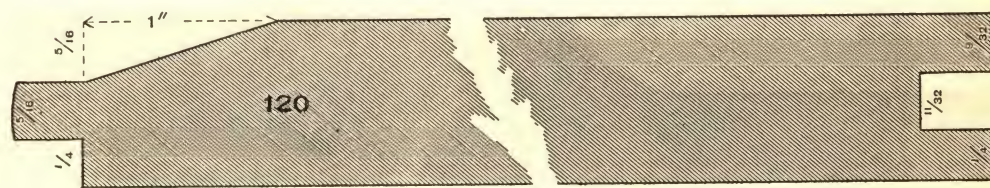
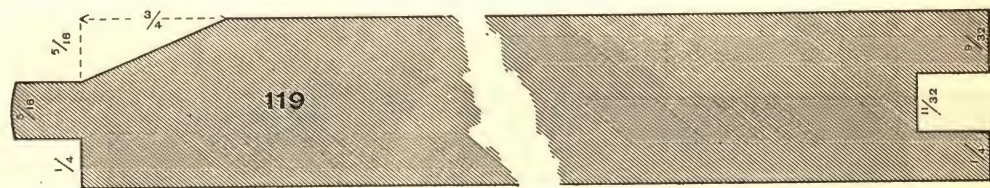
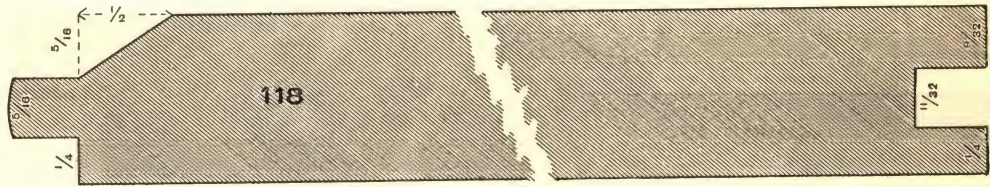
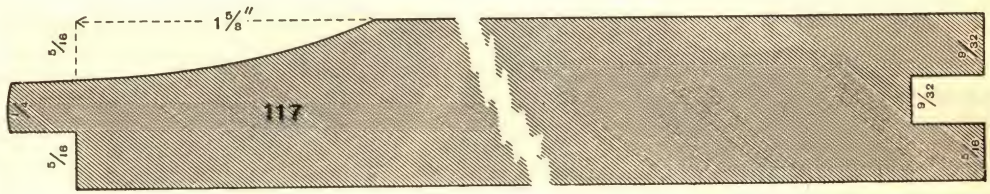
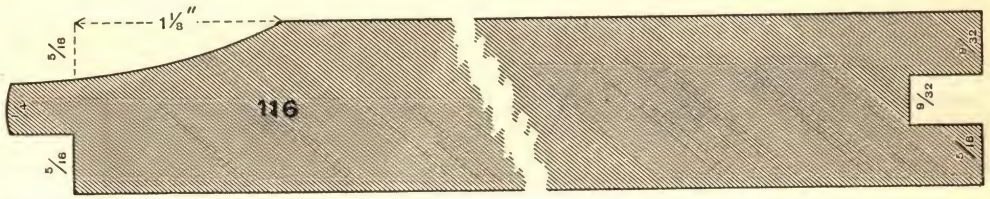
The patterns of Bed Rails, Nos. 137 to 146, are formed with specially constructed Grooving Heads to fit the side spindles of any moulding machine. Bits to suit many of these designs can be applied to the same Heads as patterns Nos. 134 to 141. To work patterns Nos. 142 to 149, differently constructed Heads are needed to give clearance to the square offsets noticed in these patterns.



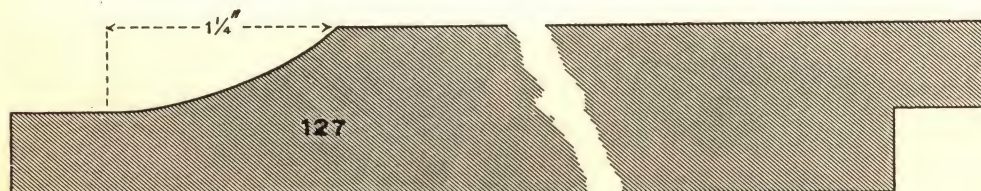
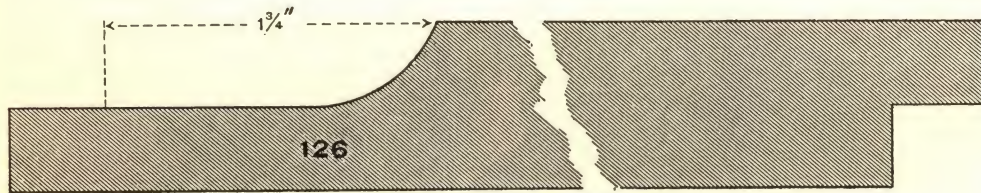
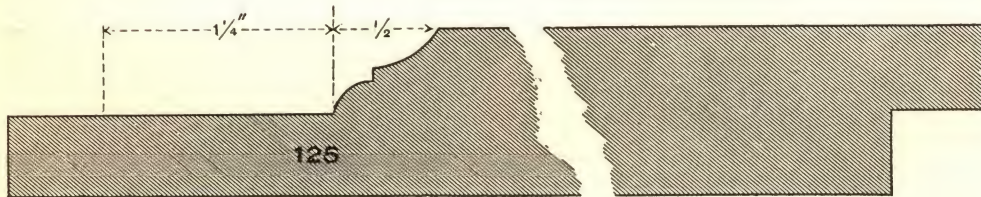
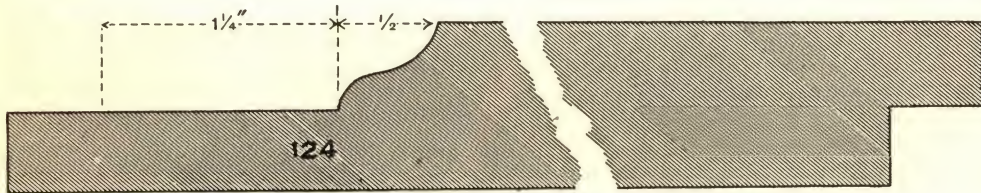
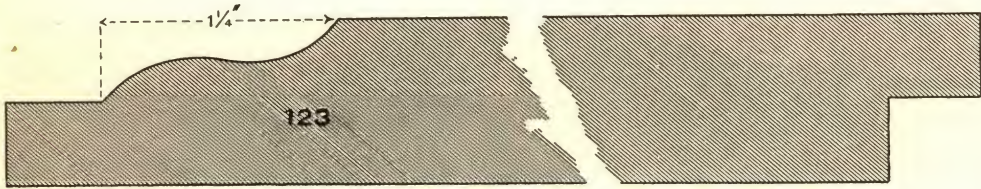
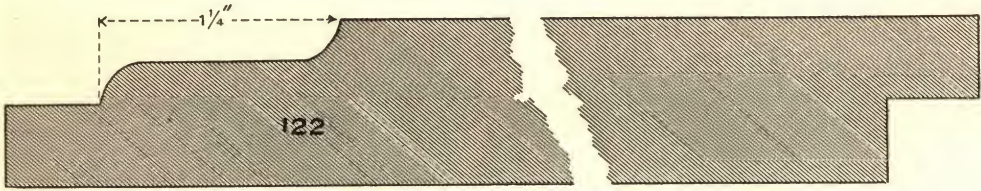
Novelty or Drop Siding



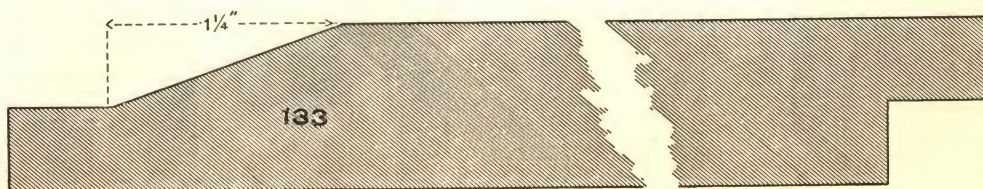
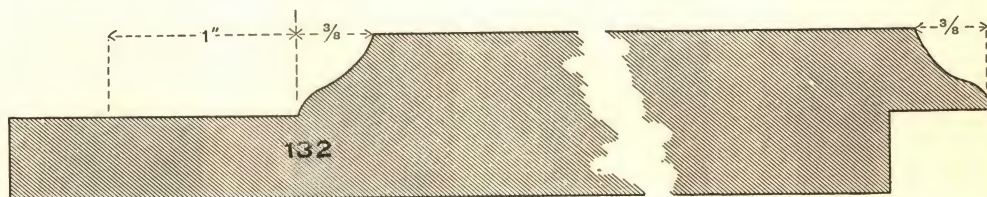
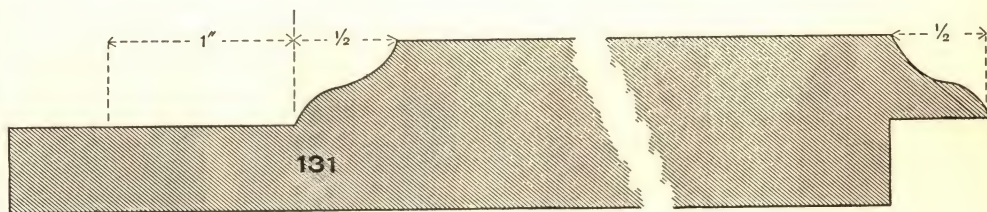
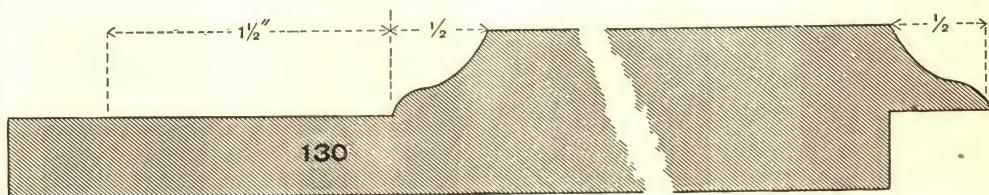
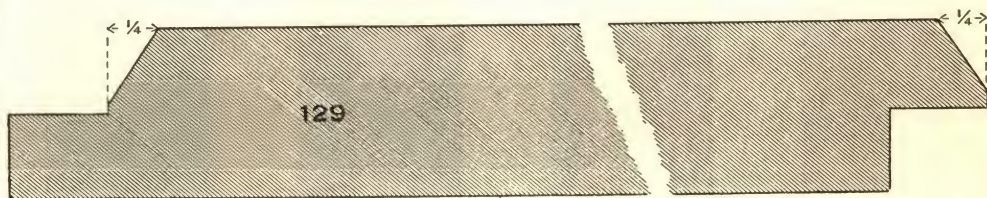
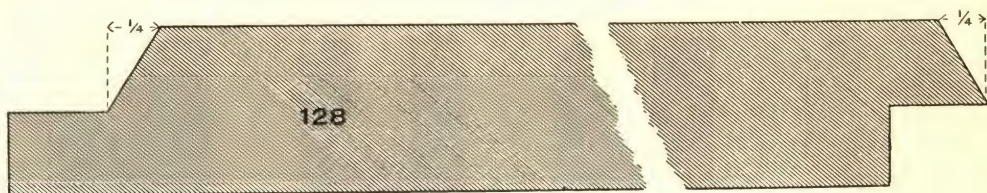
Novelty or Drop Siding



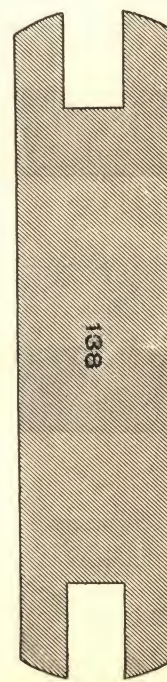
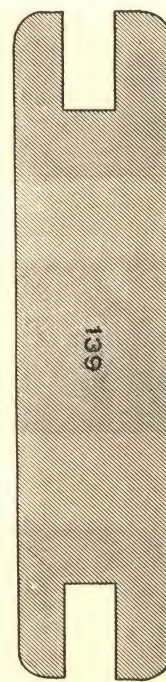
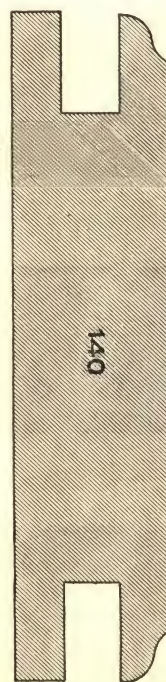
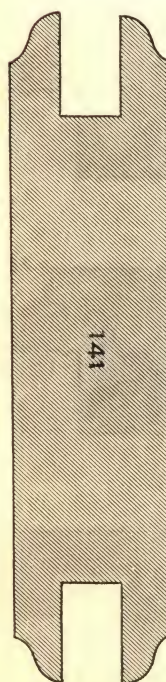
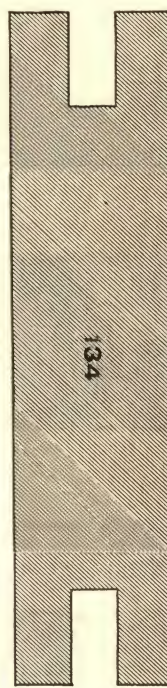
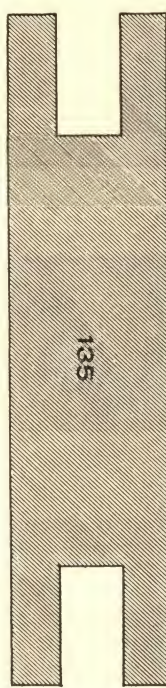
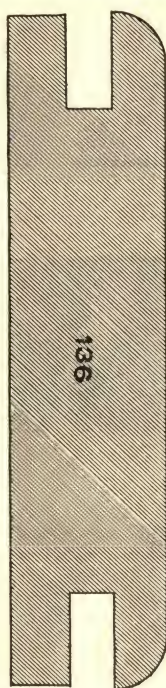
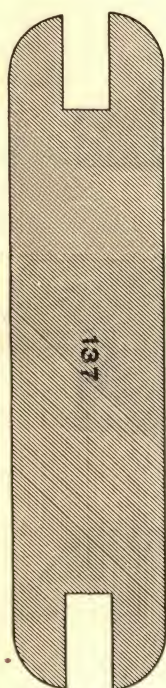
Novelty or Drop Siding



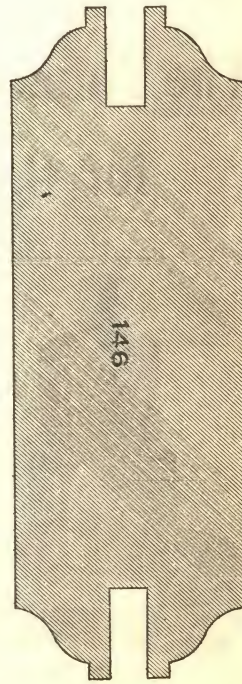
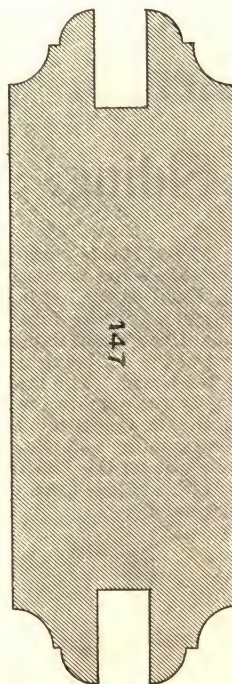
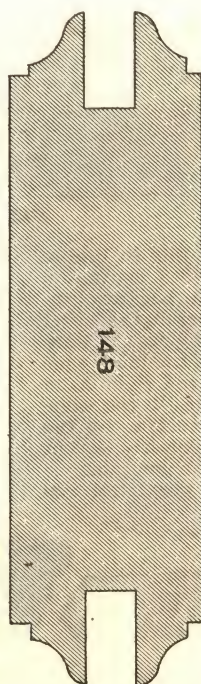
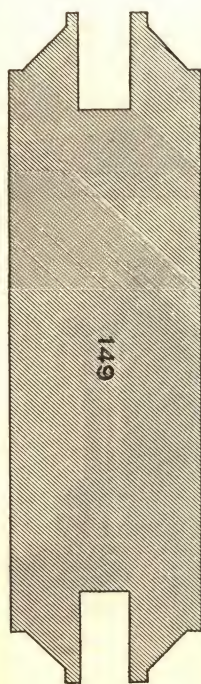
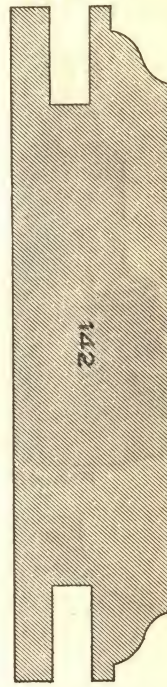
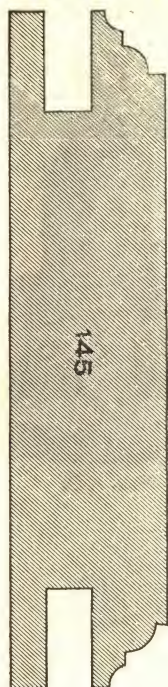
Novelty or Drop Siding



Bed Rails



Bed Rails



The Shimer Heads for O. G. Batten.

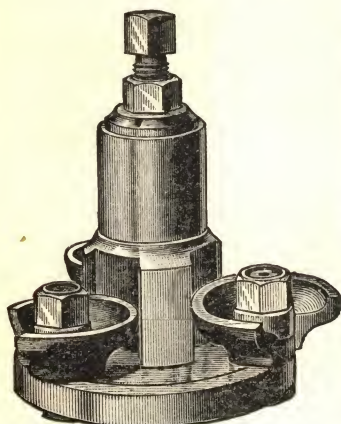


FIG. 48.

These Heads are made to carry three Bits in line of work, all fastened to the upper side of the Head flange. The Bits are inclined outwardly, bringing only the cutting edges in contact with the lumber. The circular contour of the Bits are protected from friction, and maintain their shape until used up. The Bits are filed and set to a gauge accompanying each Head. The bolt heads are in this case on the under side of the Cutter Head, over which the gauge fits to fix the Bit in position. These Heads are provided with our locking device to the bolt for the holding of the Bit between two fixed surfaces, and carry all of our latest improvements.

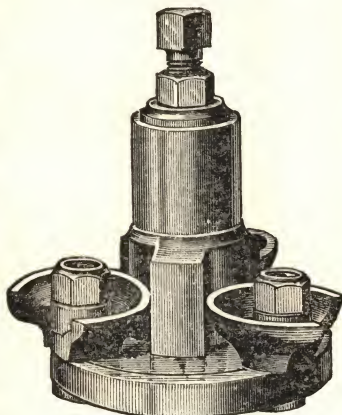


FIG. 49.



FIG. 50.

Price, Heads per set, complete . . \$30.00

" New Bits, per set (6) . . . 12.00

The Shimer Heads for O. G. Siding.

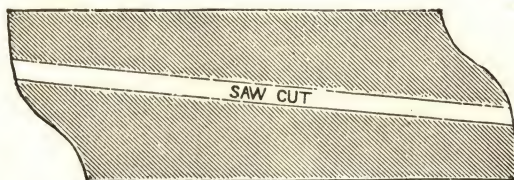


FIG. 51.

These Heads carry three Bits in line of work the same as those described above, but the Head on the left hand side has the clearance arranged for Bits working on the lower side of the Head flange, owing to the deep part of the cut being made on the lower edge of the board. The Head on the right hand side of the machine is practically the same as the O. G. Batten Head working on the same spindle, and where the depth of the cut is no greater the Bits are interchangeable.

These Heads have all of our latest improvements.

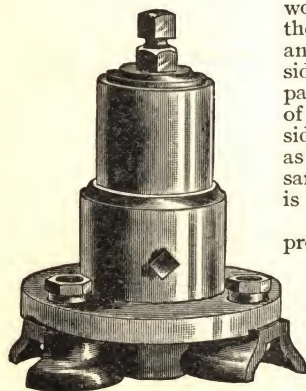


FIG. 52.

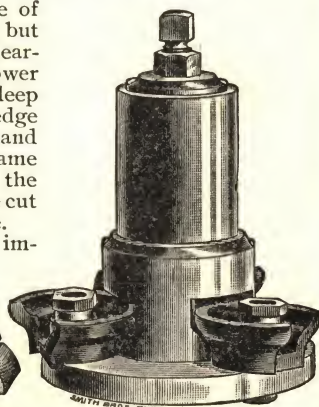
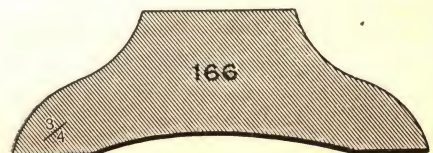
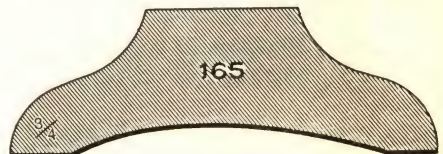
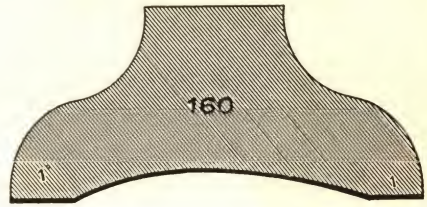
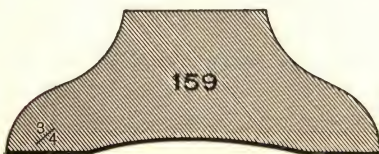
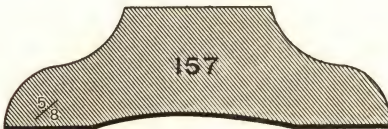
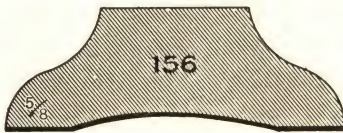
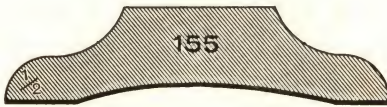
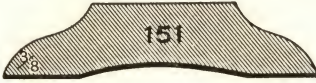


FIG. 53.

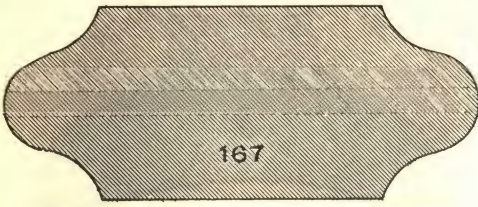
Price, Heads per set, complete \$30.00

" New Bits, per set, (6) 12.00

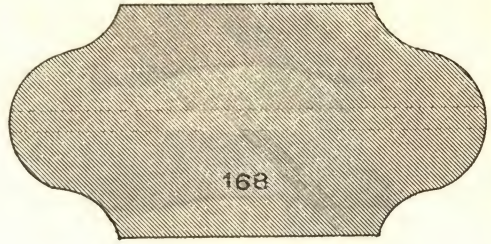
O.G.Battens.



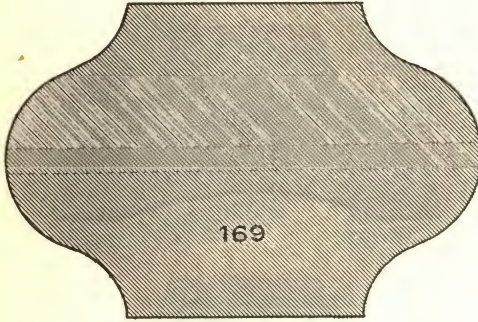
Double O.G. Battens



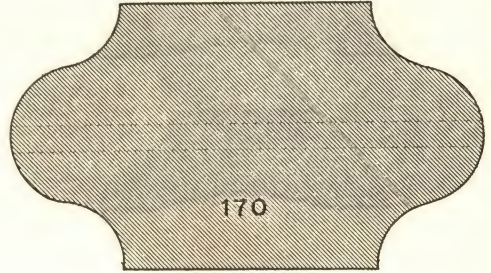
167



168



169



170

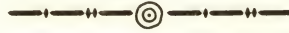
We represent above a few patterns of Double O. G. Battens, for which we make *special heads*. The Heads are strong and substantial, and do the work to perfection.

They Are Just the Thing for Fast Cutting,

being made with four Bits divided into upper and lower series, somewhat after the plan of our Matcher Heads. They will cut the same pattern until the Bits are used up. Other styles of Bits for Double Battens can also be used in the same Heads.

Price, Heads per set, complete \$38.00
 " *New Bits, per set, (8)* 14.00

The Shimer Jointer Heads.



These Heads are provided with our Locking Device to the Bolt for the holding of the Bit between two fixed surfaces. The seats are concaved about their bolt centres and carry all of Our Latest Improvements.

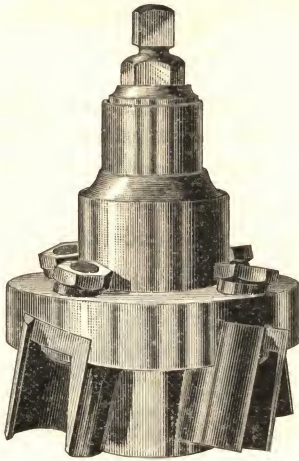


FIG. 54.

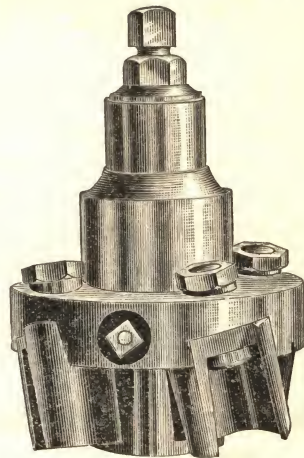


FIG. 55.

The Shimer Jointing Heads with four Bits are very special for making a clean shave cut. They leave the edges or corners of the plank full and perfect. By examination of the Heads, it will be noticed that the shave of the cut begins at the top edge of the plank after a very heavy draw given the Bits. This curls the chip downward after a line diagonally across the edge of the passing board or plank, and prevents any chipping up or tearing out about the knotty exposures.

The Heads are made "for glue joint" to cut square, fitting close top and bottom. "For plain joint" with a little clearance on the under side, and for "Boat Bottom" a plain joint along part of the upper edge, and a deep clearance to take the calking from the opposite side.

Heads for jointing plank for boat linings, however, are always made to order, and sample or Blue Print of the siding is given with the order.

Price, Two Heads, one set complete for Jointing	1 1/4 inch boards and under	\$30.00
" " " " " " " "	1 1/2 to 2 1/2 inch plank	32.00
" New Bits per set (8) for Jointing	1 1/4 in. boards and under	12.00
" " " " (8) " " "	1 1/2 and 2 inch plank	14.00

The Shimer Heads for Sucker Rods

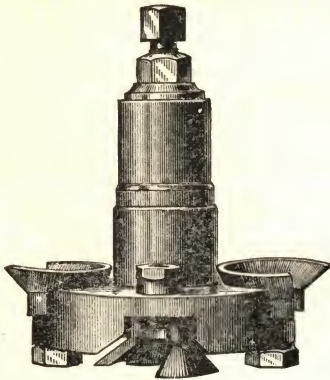


FIG. 56.

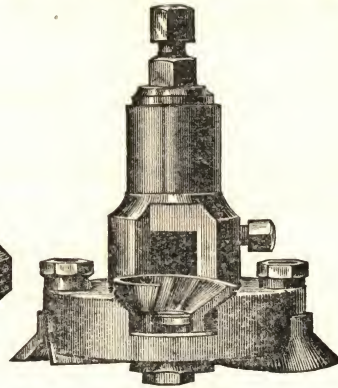
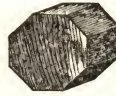


FIG. 57.

In the oil fields of Pennsylvania, Ohio and Indiana, there is a demand for Octagon Sucker Rods, to make which with ordinary Bits is somewhat laborious, and painstaking. We illustrate herewith a pair of Shimer Heads as applied to this class of work. They are made to fit any four-side moulding machine and the rods are finished at once passing through the machine. The Heads are readily understood and can be kept in perfect order by any careful machine operator.

Price, Heads complete	\$38.00
" New Bits per set, (8)	14.00



The Shimer Heads for Making Keg and Barrel Hoops.

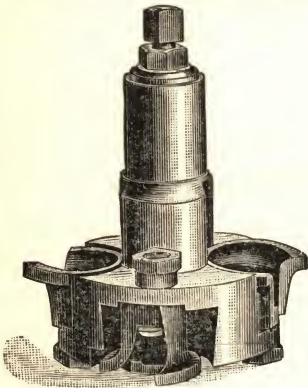


FIG. 59.

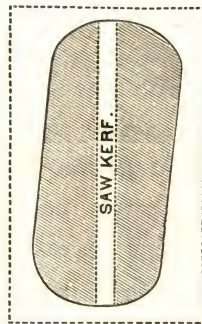


FIG. 58.

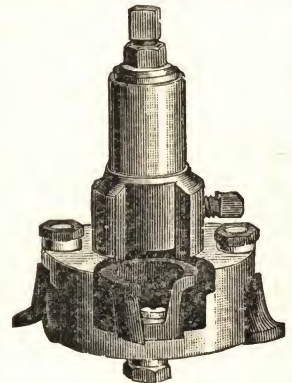


FIG. 60.

Another class of work to which the Shimer Cutter Heads readily apply is that of making hoops. The cuts herewith represent a set for this purpose as applied to special machinery with saw attachment to make two perfect hoops at once passing through the machine. The Heads are always of the same diameter, cut the same shape, work smooth edge as well as the side, and are easily sharpened and kept in order.

We make them to suit any hoop machine, to work on vertical or horizontal spindles.

Price, Heads complete	\$38.00
" Bits per set, (8)	14.00

The Shimer Cutter Heads



...For Box Board Matching.

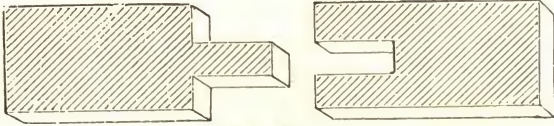


FIG. 61.

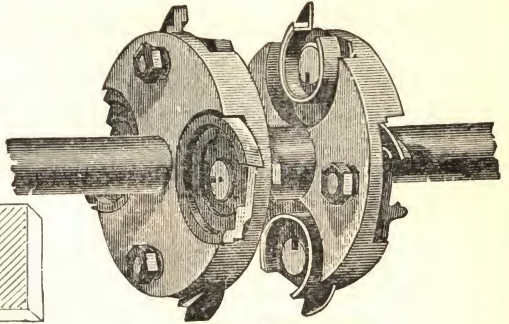


FIG. 62.

The above cut represents a set of Shimer Cutter Heads for matching Box Boards—work that requires much handling of small pieces of boards, that hold together by the neat fitting of **Tongue and Groove Joint**. It is, therefore, important to have a Head that will make a *uniform cut*, matching the pieces alike in every particular, as well after years of use as when new. There is no friction on the Bits, consequently no power wasted. *This is, without doubt, the easiest running and most practical Box Board Matcher Head in use.*

Price, per set \$30.00
 " New Bits, per set 12.00

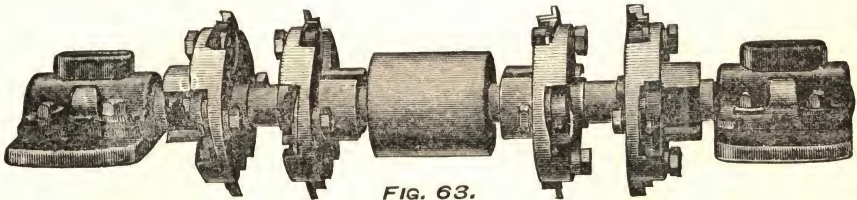
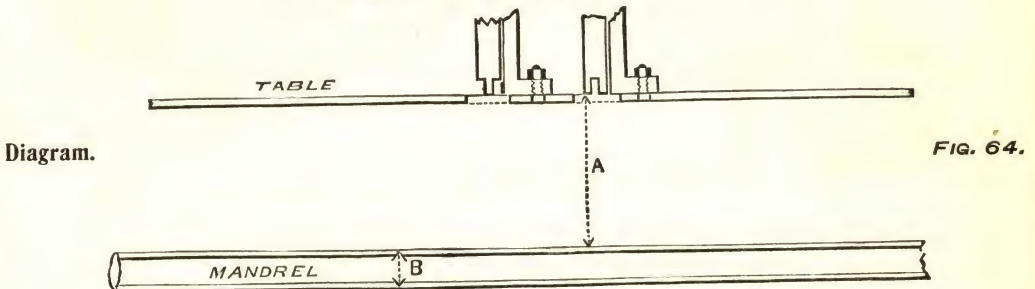


FIG. 63.

We frequently have calls for a mandrel with boxes and pulley, upon which to use the Box Board Matcher Heads, suitable for those desiring to make a wood frame machine. We herewith illustrate mandrel for this purpose.

Price of Mandrel, for one set of Heads \$ 8.00
 " " " TWO sets of Heads, as shown 10.00

HOW TO ORDER:



In order that you may fully understand how to take the measurements, we give above a diagram, representing a mandrel in a machine, as commonly used. In measuring give the following information, viz:—

- Distance from mandrel to top of table, line A
- File a wire the length of which will give the exact diameter of the spindle or mandrel, B
- How much mandrel space can be occupied by each Head?
- When you stand feeding, is groove made on right or left side of machine?
- Mention thickness of Box Boards to be matched

Byrkit & Hall Sheathing Lath

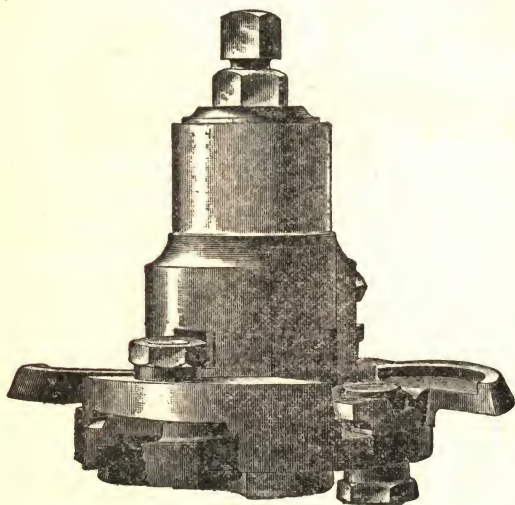
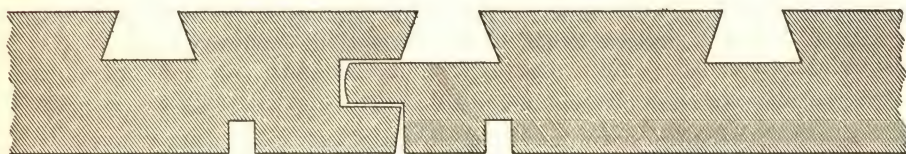
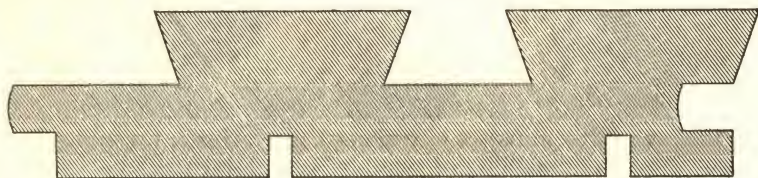
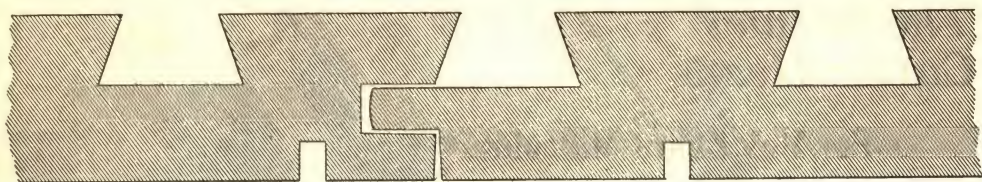


FIG. 68.

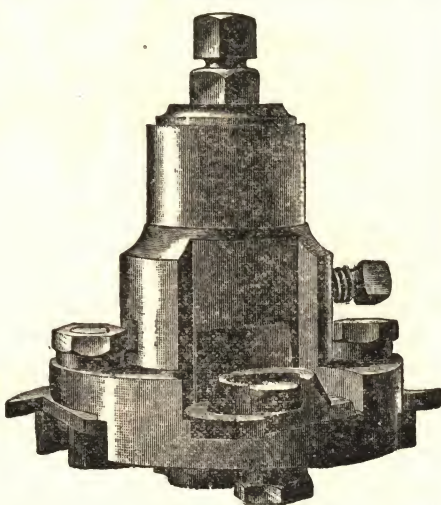


FIG. 69.

The Shimer Matcher Heads as applied to Byrkit's Sheathing Lath.

These Heads are in every respect the same as the Standard Shimer Matcher Heads for flooring, with the exception that the Tongue Head is cut out around the bit chambers to suit the upper cutters on the Tongue Head which do the deep cutting. (See cuts above.) In order to apply these Bits to your Matcher Heads you should send the Tongue Head to us when practicable to be properly fitted and re-balanced.

The Bits work with perfect freedom and are well suited for hemlock and spruce, and all the cheaper varieties of lumber from which this stock is usually made.

The outfit consists usually of four Upper Bits, two Tongue and two Groove, made so as to match the lower series of Flooring Bits.

Price, 4 Bits	\$7.00
" Fitting Tongue Head and Re-balancing	1.00
" Heads complete with Bits, per set.	38.00

Beader Heads

With Four Bits in Line of Cut.

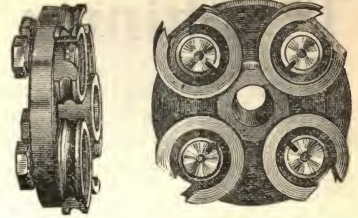


FIG. 65.

These Heads are fitted for short Mandrels with nut on end, such as are used on Beader Attachments. They are also made to suit any Mandrel, *long or short*, with Bits to cut any bead of average width that can be properly classed under this head.

A study of the cut will point out the fitness of the Circular Bit, and the advantages it has over all others, for the work to which it is here applied.

Price of Heads, complete	\$25.00
" Bits per set, (8)	10.00

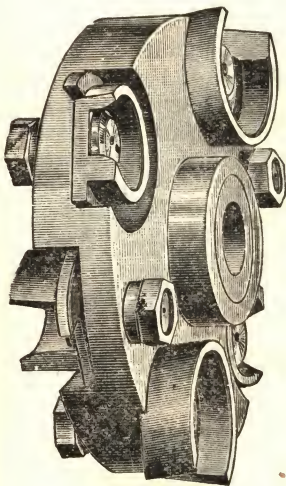


FIG. 66.

Matcher Head

for Piecing

Chair Seats.

This engraving represents a Head for piecing together **Chair Bottoms**, illustrated by sample of the work, which when glued together, is not only as good, but *actually stronger than the solid plank*.

By a careful examination of the pattern you will notice that the two pieces of work represented are of one and the same piece—simply reversed, in order to put together.

The Head does its work with perfect accuracy, and the material so matched will fit snugly under all circumstances.

Price of Head, complete	\$22.00
" New Bits, (2 Rabbing, \$3; 4 Grooving, \$7) . .	10.00

Glue Joint for Chair Seat.

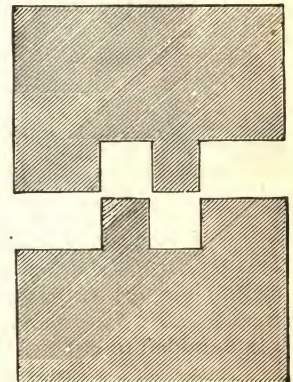


FIG. 67.

The Shimer Heads for Blind Slats.

This is another of the uses to which the Shimer Cutter Heads apply with the most satisfactory results. The Head is made with that accuracy which characterizes our work throughout our entire line of tools.

Price, complete with Bits \$20.00
 " New Bits, per set 10.00

How to Order,

See page 60.

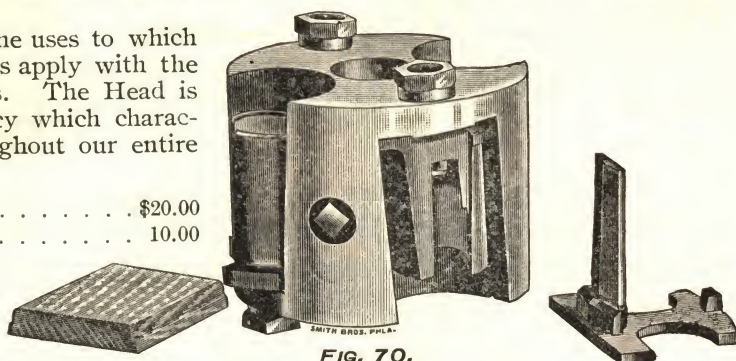


FIG. 70.

The Shimer Head for Trunk Slats.

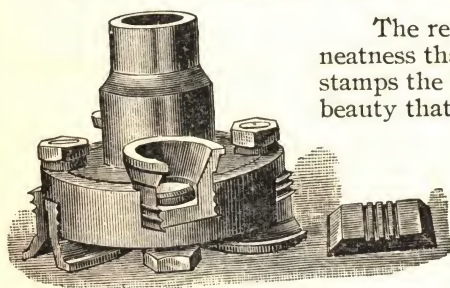


FIG. 71.

How to Order, see page 60.

Price of Head, complete \$20.00
 " " New Bits, per set, (4) 10.00

The reputation of the Mechanic depends much upon the neatness that characterizes his labor. A neat Trunk Slat stamps the Trunk at once with favor and adds, to strength, a beauty that commands more than a passing notice.

Trunk makers understand this, and appreciate the **Shimer Heads**, that carry the shape of the Slat in the contour or outline of the Circular Bits, that are arranged in two series, to overlap a central line, and cut with perfect side clearance to their leading points, producing standard work until the entire circle of Bits are used up.

The Shimer Cutter Heads for Drop-Leaf Table Joint.

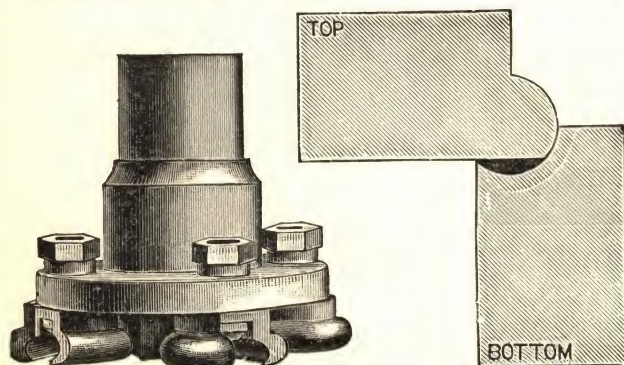


FIG. 72.

FIG. 73.

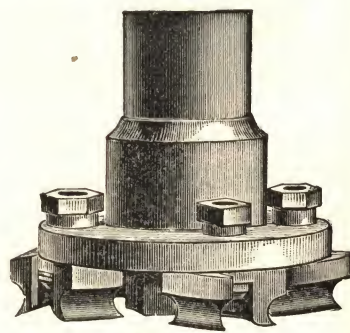


FIG. 74.

The Heads illustrated herewith are fitted with Bits that cut the shape of knuckle-joint for Drop-Leaf Tables, as shown by the above diagram of the work, which explains itself. The difficulty of keeping the straight Bit up to standard shape, is fully understood by all who are engaged in this branch of Cabinet Work. The Heads, with Circular Bits moulded to cut the desired shape continually, are greatly appreciated.

Price, per set, complete \$32.00
 " New Bits, per set, (8) 12.00

Blind Rod Head.

This engraving represents a Head for making two oval or oblong rods out of one piece, cut, say, $1\frac{1}{4} \times \frac{3}{4}$, or larger as it may be found in an offal pile of strips. The diagram shows two rods finished one side—the other side in outline. It will be understood that Heads for work similar to this can be made on the same plan. The Bits hold to the special shape they produce until worn out, and work with an easy cut, being set on an inclined seat for side clearance, and make a shearing, alternate cut, producing a rod of uniform shape.

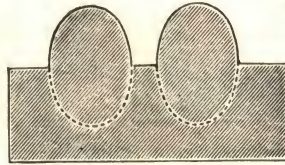


FIG. 75.

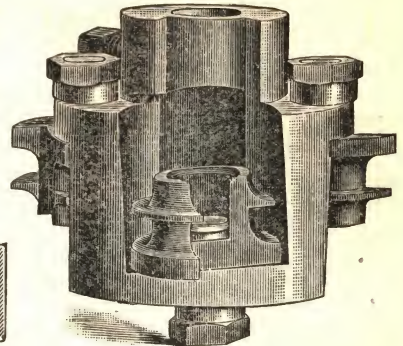


FIG. 76.

Price, complete, with Bits, etc. \$20.00
 " New Bits, per set, (4) 10.00

CROZING HEAD.

Herewith find illustration of a **Crozing Head**, which we have recently brought out for the purpose of crozing hogshead, barrel and keg staves—a cut that is made across the grain of the wood, and one usually difficult to produce with the ordinary style of cutters. These cutters have a backward shear cut; are filed and set to suit the gauge, and will always cut uniform and smooth. A trial will convince you that you can no longer do without it.

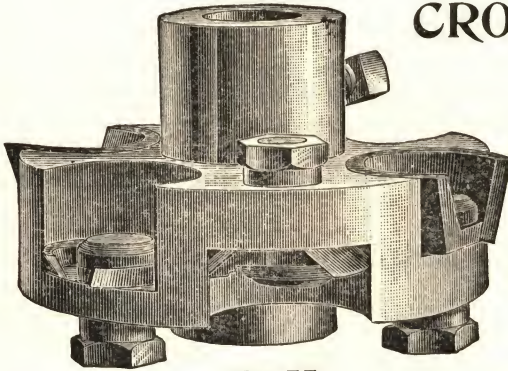


FIG. 77.

Price, complete \$20.00
 " New Bits 10.00

Flush Moulding Head.

This cut represents our **Improved Flush Moulding Head**, which carries three Bits in line of work. The Bits have perfect relief back of their cutting edges, consequently will not heat or burn the lumber. We guarantee it to be the best and simplest tool in the market, and that any machine man with average ability will be able to produce superior work by its use.

We form the Bits to suit any pattern you may desire.

Price, complete Head \$16.00
 " New Bits, per set, (3) 6.00

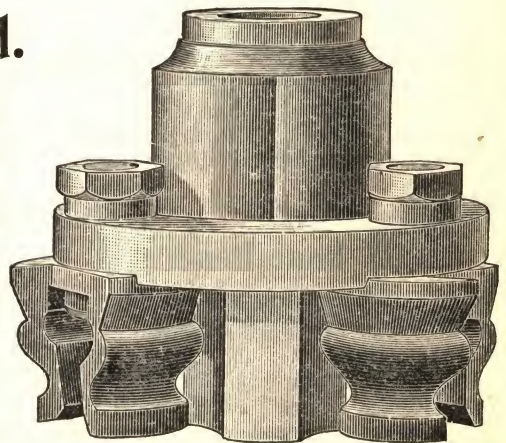


FIG. 78.

For patterns of Flush Door Mouldings, see page 74.

HOW TO ORDER:

FOR MATCHER OR MOULDER.

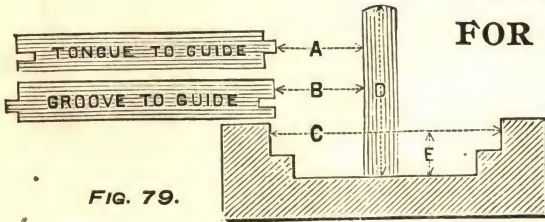
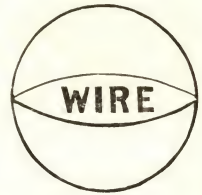


FIG. 79.

This cut represents the Spindle to the right; and please mention particularly if you make tongue or groove on right side as you stand feeding the machine.

Send a wire the length of which will give the diameter of Spindle (see diagram below.)



Now measure line D from top of box to top of Spindle inches ; now measure line E from level of planer bed to the bottom of Matcher plate, in which Head runs inches ; now measure line C, the largest recess in Matcher plate, in which the Bits revolve inches ; now measure line A, if tongue to guide, or line B if groove to guide; thus: Place a straight edge across the opening in the fence or guide, and take the measure between the straight edge and edge of the Spindle inches.

This measure, doubled and added to the length of wire (the diameter of Spindles), will give the surfacing diameter of the Head, or smallest cutting circle. This last measure determines the size, therefore be particular.

Can you move the fence or guide, and how much? Give measure of solid part of Head across the bottom, inches ; and whenever you can, give maker's name of Machine, for we may know also by that what size you need. If the right and left hand Heads should differ in size, one from the other, give the measurements for both Heads as above.

In ordering new Bits for Matcher Heads, give the number of the Heads. In ordering Double Ceiling Heads, Ship Lap Heads, Jointer Heads, etc., give the number of the Matcher Heads, if they are wanted to fit the same Machine.

How to Order Door or Sash Heads for Moulder.

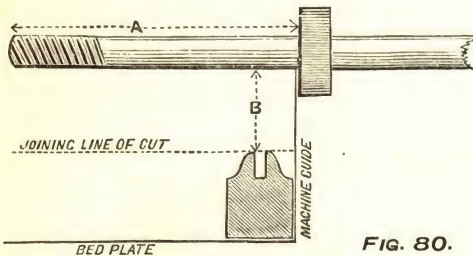


FIG. 80.

File a wire, as shown on small diagram, to fit Spindle or hole in Head. Next send a piece of door style into your Machine, and stop it under the Spindle. Measure from under edge of Spindle to jointed edge of board, same as line B, of Fig. 80, and give us the length of that line in inches. . . .

What is the length of line A ; that is, how long is the Spindle inches. How long shall we make the Head you order. inches? Is it fastened with nut on end of Spindle, or by set screw in the Head. ? Let us have measure

of Head you are using on the Machine, across the bottom inches. This measure we want so that we can compare it with what you give us above. What is your Machine called—has it a name or number, and who built it? In ordering Cope Heads, see directions on page 6r.

How to Order

Dado Heads:

1. File a wire the length of which will give the exact diameter of the mandrel
2. Give length of mandrel from collar to nut
3. Give diameter of collar
4. Give diameter of nut
5. Give distance from mandrel to top of table when properly adjusted
6. Mention the widths of groove you wish to make

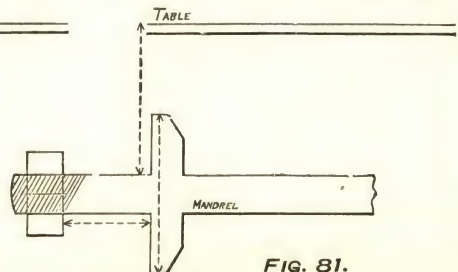


FIG. 81.

The Shimer Head

for Making Doors.

*It turns out Perfect Work,
and the O. G. will fit the
Coping continually.*

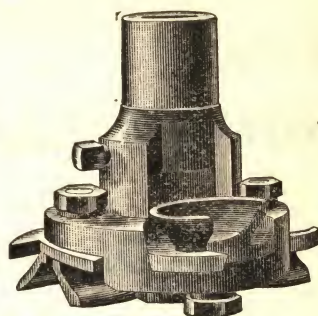


FIG. 82.

The above engraving represents a **Door Ogee and Grooving Head**, with all the latest improvements. The Grooving Cutters operate with side clearance, and the Ogee is turned into the outer circle of the Cutter, thus maintaining a uniformity of pattern.

Send, with order, a cross-section of your pattern, about one inch long, and the Cutters will be carefully shaped thereto, and guaranteed not to tear under the fastest feed. If, in looking over the following pages, you find pattern to match your work, please give the number marked on it. The alternate operation of the Cutters, their light and easy running, and the labor and material they save, are the special points of value which serve to establish them in their wide-spread reputation.

Price, complete with Bits, etc \$20.00
" Bits per set, (4) 10.00

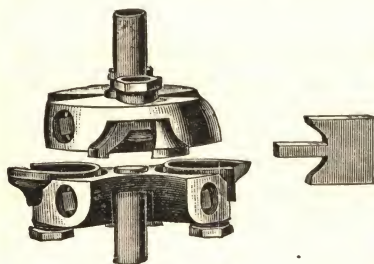


FIG. 83.

This cut represents a pair of Cope Heads, in the position they occupy when in use on the Tenoner.

They are fastened to the Spindles by means of two set screws, as shown in the engraving, and are made so that they can be taken off to sharpen, without disarranging the Spindles.

The Bits are made to any special shape, to fit the work to which they are to cope; and, the outer circle not being changed by wear, the Coping produced will be of one standard pattern, until the entire circle of Bit is used up.

A gauge is carefully fitted to these Heads, which regulates the adjustment of the Bits. **After the Bits are adjusted, file the edges thin from the inside, using 6-inch half-round files.**

One set of Bits will cope for Doors of any change of thickness, so long as the style of the O. G. is the same.

Price, Door Cope Heads, per set, complete \$20.00
" New Bits per set, (4) 8.00
" Sash Cope Head, complete 10.00
" New Bits, per set (2) 4.00

HOW TO ORDER:

If the Heads are shrunk on the Spindles, remove them by heating to a low red heat in a blacksmith's fire, then file a wire for size of spindles, as per diagram, page 60. Give thickness of Heads, and the solid diameter, and mention maker's name of Tenoner, and if you can, give the largest circle the Bits may cut to and not strike.

THE SHIMER

Expansion Door Head.

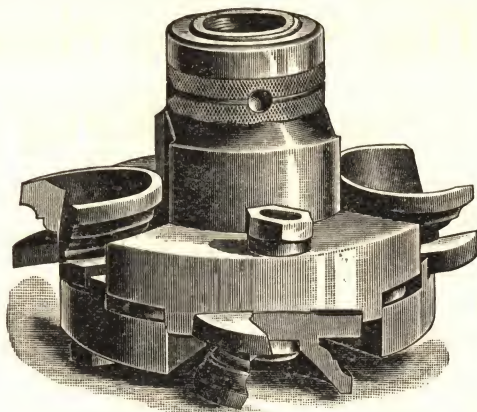


FIG. 84.

This Head is provided with seats concaved about their bolt centres, the holding bolts being provided with our bolt locking device to hold the Bit between two fixed surfaces. The special incline given the seats determines a better lead to the cut and carries a greater protection to the edge of the Bit.

The Expansion figures $\frac{1}{3}$ of $\frac{1}{4}$ of an inch to the notch on the lock nut—a close adjustment to compensate for the wear on the mortising chisel. The Expansion figures also to a change of groove $\frac{1}{8}$ less than double the width of the groove in the pattern you first select, and for which the Bits are first made. Thus pattern 1, with a groove $\frac{1}{4}$ inch wide by $\frac{1}{2}$ inch deep, can be expanded to make pattern 1 with a groove $\frac{3}{8}$ inch wide and $\frac{1}{2}$ inch deep. The limit of the Expansion is fixed at about $\frac{1}{8}$ of an inch, which invariably covers the practical limit that applies to any one set of Bits, because the Grooving Cutter that will work in a groove $\frac{1}{4}$ of an inch wide will expand to full $\frac{3}{8}$ wide only, viz: ($\frac{1}{2}$ inch less $\frac{3}{32}$ wide, less $\frac{1}{32}$), the $\frac{3}{32}$ being the measure of clearance that must be given the Bits to work and clear the two sides of the Grooving Cutter working $\frac{1}{2}$ in. deep, and leave the $\frac{1}{32}$ for overlap along the centre line of the cut.

By the Term Expansion we do not mean to convey the idea that one set of Bits will work Door Stiles for every thickness of Doors, but that the bit line of cut can be changed by simply turning the lock nut to widen the groove about $\frac{1}{8}$ of an inch to suit the next heavier door pattern.

The Moulding of the Doors practically limits the Expansion to a set of Bits. The mould curvatures and outlines to harmonize with Doors 1 inch to $1\frac{1}{2}$ inch thick will no longer produce a pleasing effect upon Doors made $1\frac{3}{4}$ to 2 inches thick. A special Head or a special set of Bits are selected for the heavier doors, to which again the same adjustment will serve to the limit of their Expansion.

Price, Door Head, with Expansion complete, with one set of Bits \$22.00
 " Extra Bits per set, (4) 10.00

THE SHIMER

Patent Slotted Expansion Head

Is useful in that it will take Cutters for every class of work—Door, Sash and Blinds.

It carries Patented Side Clearance Bits same as shown on page 19, and will adjust for tight or loose work or to the enlargement of the pattern to the limit of the design, the same in this respect as the Heads with circular bits, and it is altogether a very handy tool.

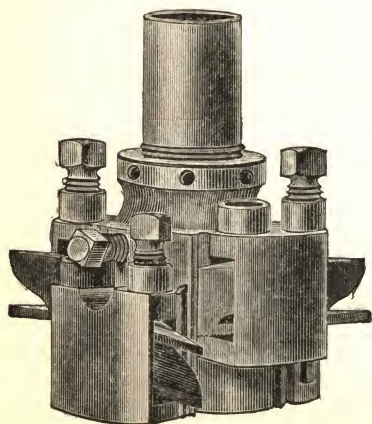


FIG. 85.

Price, Head complete with Door Bits \$18.00
 " Bits per set—Door 6.00
 " " " Sash, 2 Mould \$3; 2 Rabbet \$2 5.00
 " " " O. G. Blinds 6.00
 " " " Sash Door 6.00
 " " " Flush Door Moulding . . . 6.00

HOW TO ORDER, SEE PAGE 60.

EXPLANATION.



The several pages following illustrate upwards of 90 different shapes for Moulded Doors. These patterns make up but a small variety of the shapes we have been called upon to make, but they seem to be the leading ones, and from which, possibly, you may prefer to make selection.

See page 64, pattern No. 1, for $1\frac{1}{4}$ Doors with groove $\frac{1}{4}$ inch wide, $\frac{1}{2}$ inch deep. This will expand and make the next size shown for $1\frac{1}{2}$ Doors with groove $\frac{3}{8}$ wide by $\frac{1}{2}$ inch deep, but it will not expand to the third size shown, having groove $\frac{1}{2}$ wide by $\frac{1}{2}$ deep, because the Bits to cut the $\frac{1}{4}$ inch wide groove in the first pattern must be less than $\frac{1}{4}$ inch wide on the point, as much less in width on the point as the set of the Bit to an incline for side clearance, to carry out the saw set principle. But if you cut groove 5-16 inch wide by $\frac{1}{2}$ inch deep for the $1\frac{1}{4}$ pattern, No. 1, you can expand to any intermediate width of groove up to $\frac{1}{2}$ inch for $1\frac{3}{4}$ doors, as shown by that size diagram. Pattern No. 4, and some others, will admit of the same change. Patterns 3 and 7 make up into $1\frac{1}{2}$ and 2-inch Doors, with any change of groove from $\frac{3}{8}$ inch to $\frac{5}{8}$ inch wide by $\frac{1}{2}$ inch deep or 9-16 deep on any pattern, if you prefer. These Heads will admit of as much change, and cut as many sizes as you can make up with any other single style of Bit, so that the Coping Heads will answer for as many sizes as is practical with any set of Bits used on this class of work. When you order No. 65, explain if you run square part next to Machine, or the opposite way.

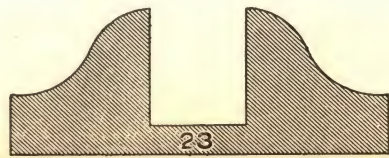
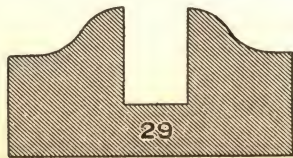
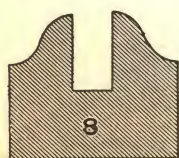
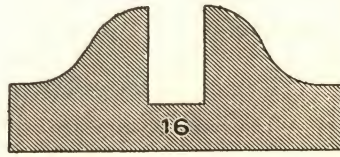
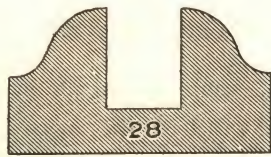
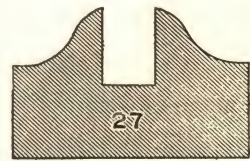
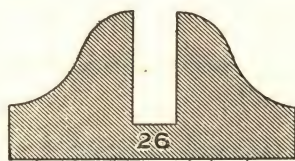
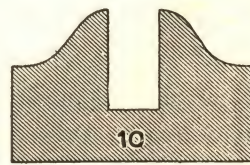
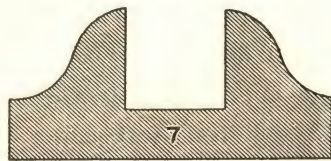
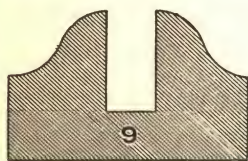
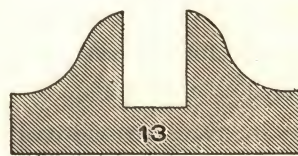
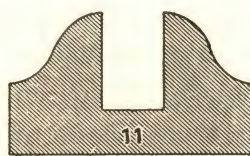
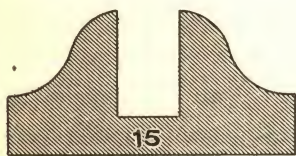
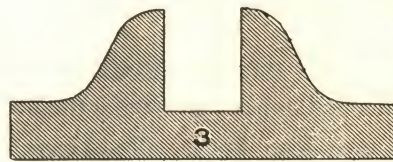
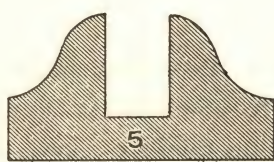
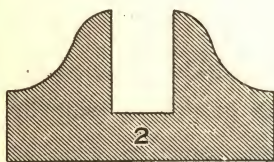
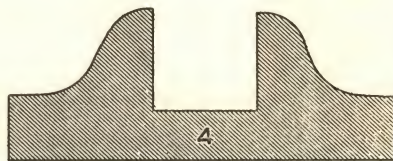
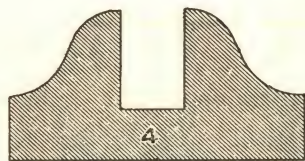
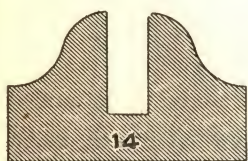
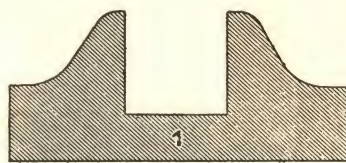
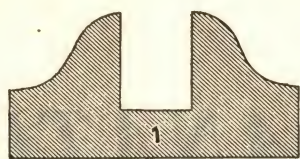
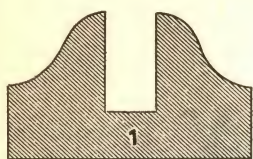
From explanation above, you will understand what scope the several patterns can be made to cover.

When you order by selecting a number, give the smallest groove you want to make in width, and the largest width also, that we may know what you want to expand. If you prefer to cut 9-16 deep, make special mention of it.

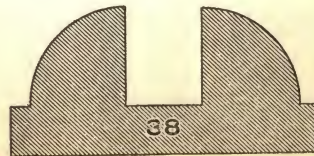
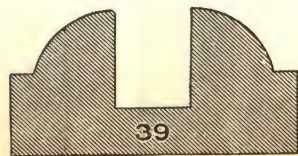
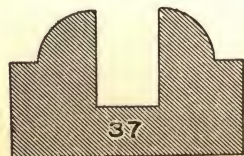
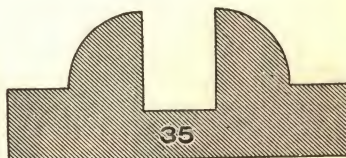
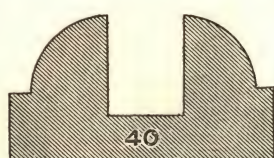
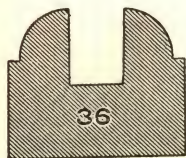
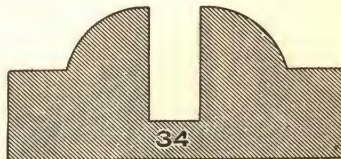
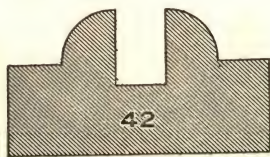
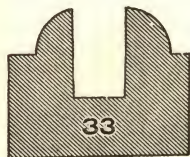
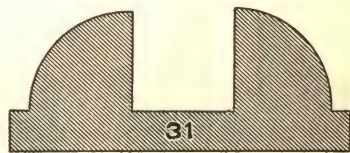
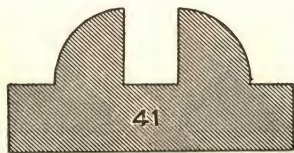
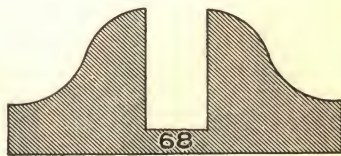
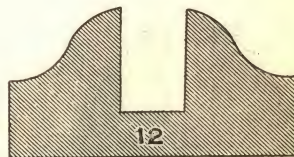
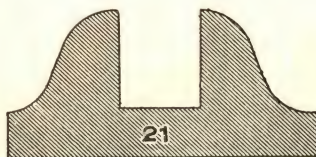
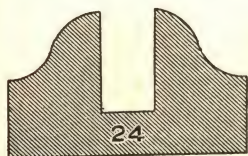
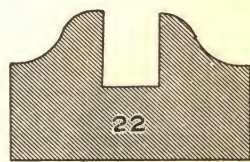
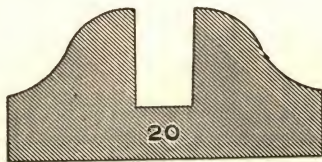
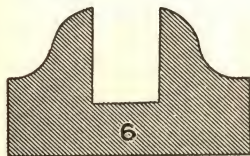
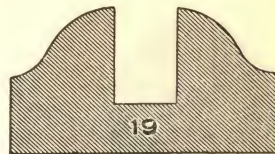
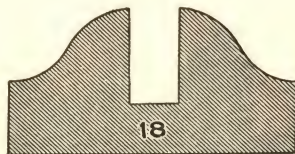
If none of this collection suit you, send us a small block, with the shape you prefer, by mail, with your order, and we will have Bits made to produce it.

Always specify particularly the style of Cutter Head you want by giving the Fig. number, so as to avoid mistakes or delays.

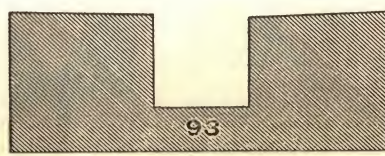
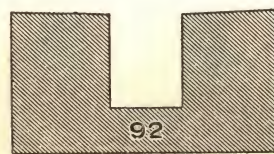
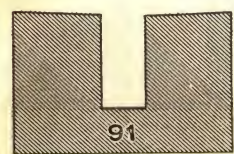
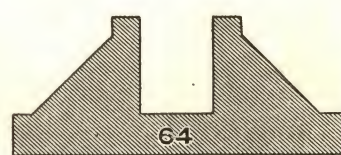
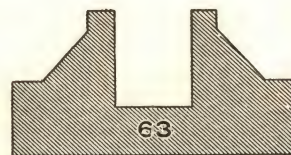
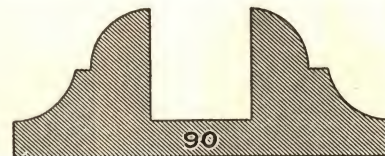
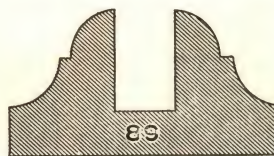
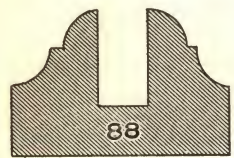
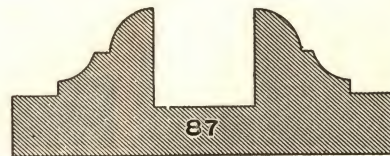
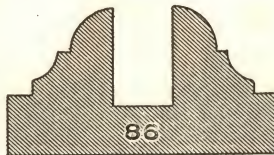
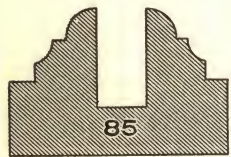
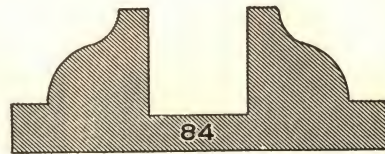
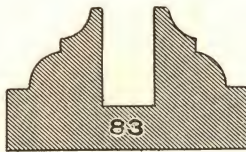
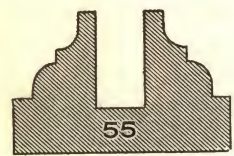
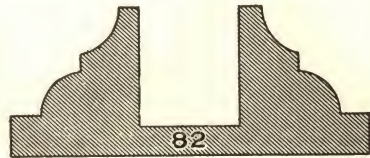
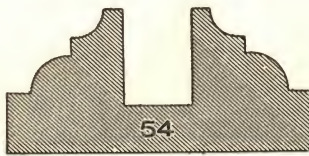
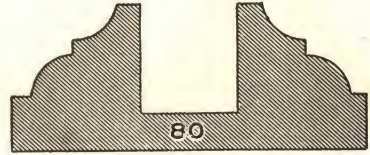
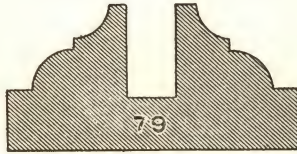
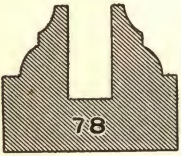
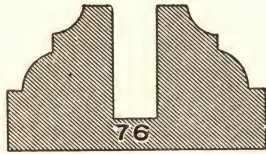
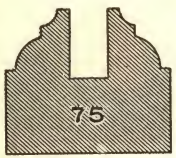
Patterns of Door Moulding.



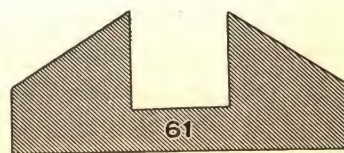
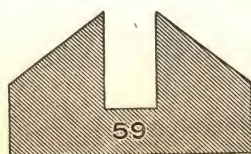
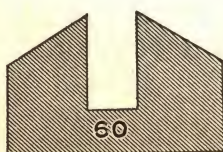
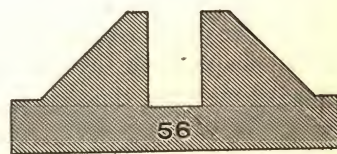
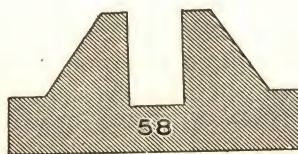
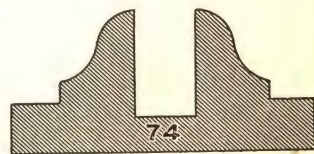
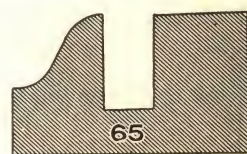
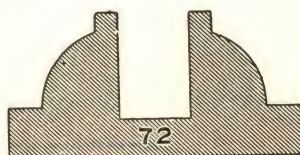
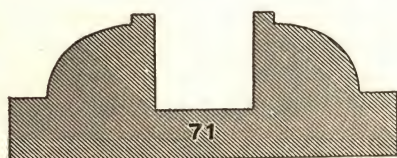
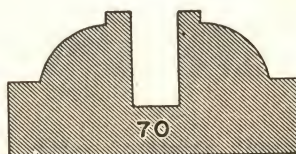
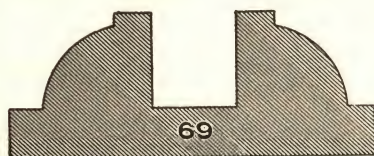
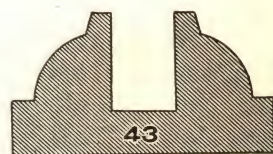
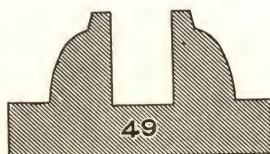
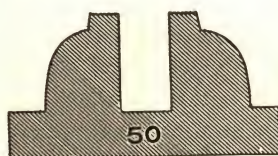
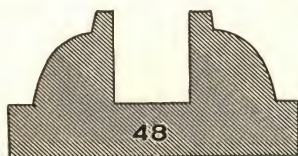
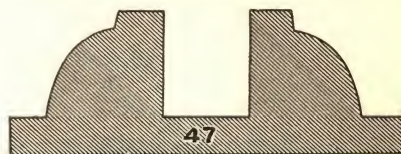
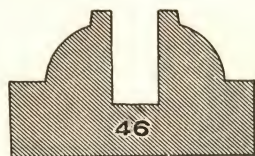
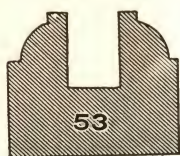
Patterns of Door Moulding.



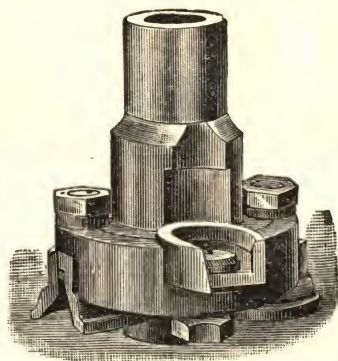
Patterns of Door Moulding.



Patterns of Door Moulding.



“Shimer”



Sash Head.

FIG. 86.

This cut represents the Shimer Sash Head, which operates alike with side clearance to the Bits, but upon Tongue Head principle, while the Door Ogee Head works upon Groove Head principle; therefore, Sash and Door Bits will not work upon the same Head. The shape of the moulding is turned in the Bits, and as they wear away, by use and continued sharpenings, the Bits are brought around, holding the same position on the Head until they are used up. The Head is, therefore, of one standard size, making a perfectly uniform pattern.

We make extra Bits to suit any pattern of Sash, which can be applied to this Head when desired.

This Head embodies many points of value. It will not “chip up” or “tear out,” but makes a perfect pattern, even under fastest feed.

Price of Sash Head, complete, with Cutters, \$18.00

“ New Cutters, per set (2 Rabbeting \$3, 2 Moulding \$5) 8.00

How to Order Sash Head, See page 60.

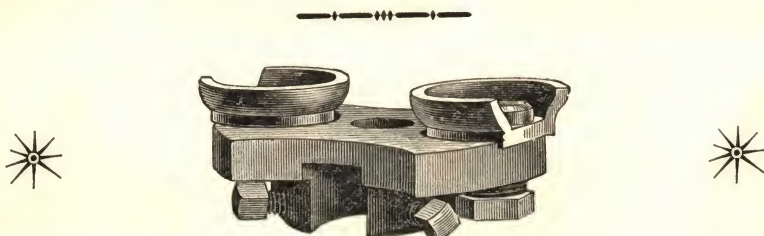


FIG. 87.

The above engraving represents a Sash Cope Head. The Bits are made to any special shape, to fit the work for which they are to cope; and, the outer circle not being changed by wear, the Coping produced will be of one standard pattern, until the entire circle of Bit is used up. One set of Bits will cope for Sash of any change of thickness, so long as the style of the mould is the same. A gauge is carefully fitted to this class of Head which regulates the adjustment of the Bits, and keeps the Head to one size continually. After the Bits are adjusted, file the edges thin from the inside, using 6-inch half-round 2nd cut files. **How to Order Cope Heads, see page 61.**

Price, Sash Cope Head, complete \$10.00

“ New Bits, (2) 4.00

SHIMERS'

Expansion Sash Moulding Head.

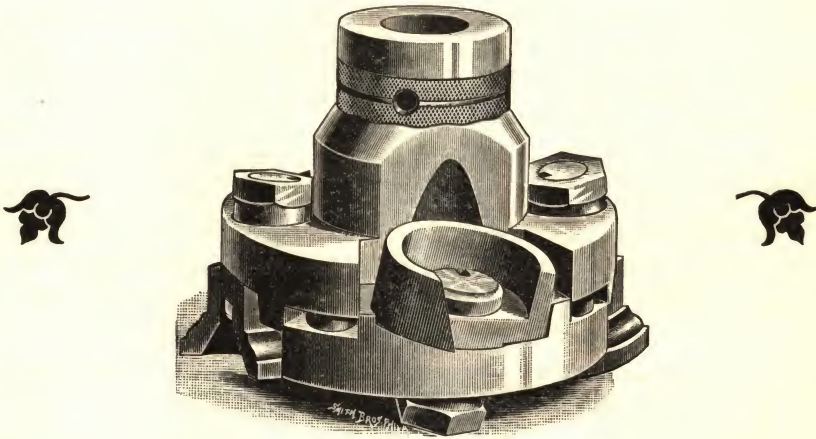


FIG. 206.

This Head has all of our latest improvements—the bolt locking device for holding the Bits between two fixed surfaces—the head seats concaved about their bolt centres to more truly center and secure the Bits—the special incline of the head seats to give greater protection to the knife edge of the Bit and a better shear cut—the Expansion, by which the head sections change the overlap of the Bits to cut a wide or narrow face.

The choice of pattern and the design of the Bits limits the adjustment. For further explanation refer to page 62.

Price, Expansion Sash Moulding Head \$20.00
 " Extra Bits per set (2 Rabbeting @ \$1.50 each ; 2 Moulding @ \$2.50 each) . 8.00



When ordering NEW BITS for any of our Heads always give us the Record Number which you will find stamped on the Heads.



✻·EXPLANATION·✻

The several succeeding pages illustrate upward of 70 different designs for Sash Moulding. These make up but a small lot of the many we have on record, but we have selected these as the best and most generally used, from which, possibly, you may prefer to make selections. If you select any of the O. G. styles, from No. 1 to No. 17, specify the size of mortise or chisel you use, as that governs the coping line (if you order Cope Head to suit).

The moulded Bit on these Heads cuts the central part, that is simply surfaced, and overlaps the part that is rabbeted away about 5-32 of an inch or more, so that Bits can be expanded to leave that central part heavier, thus making heavier sash with the same Bits. If you select a certain style that may suit you for $1\frac{1}{4}$ to $1\frac{3}{8}$ sash, having 3-16 deep rabbet, you can change to larger pattern, having heavier mould and $\frac{1}{4}$ deep rabbet, for $1\frac{3}{4}$ to 2-inch sash, by changing the two moulded Bits only.

The groove in patterns No. 76 and No. 77 is cut with two extra Bits on rabbeting seat of the Head, put in place of the rabbeting Bit ordinarily, but the most complete outfit for this special cut is made up with a complete set of Bits. The Rabbeting Bits cut one side of the groove, and the Moulded Bits cut the other side; in other words, all four Bits work in the groove.

No. 60 is the same as No. 59; the mould is cut $\frac{1}{8}$ deeper than the rabbet, and is suitable for heavy and light sash. If none of this collection suits your purpose, send us a small block with the shape you prefer, by mail, with your order, and we will have Bits made to produce it.

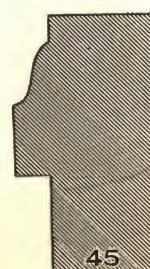
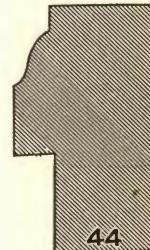
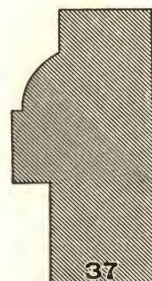
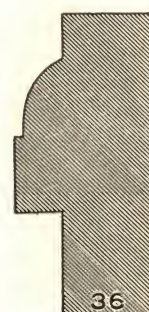
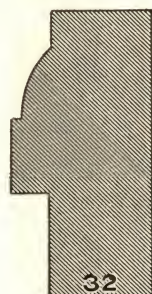
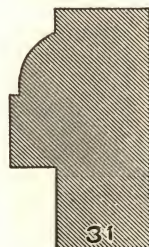
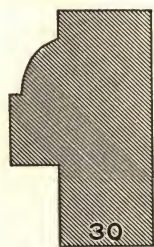
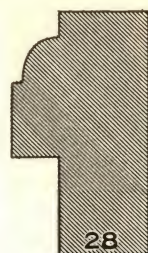
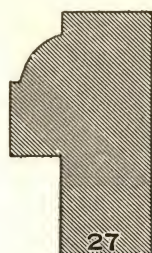
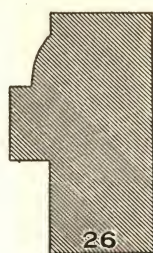
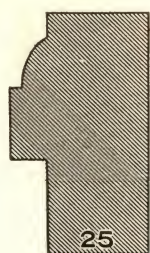
The Sash-Door Patterns shown are made with Special Heads. The Flush Door Mouldings are made with Head such as shown on page 59. Specify particularly the style of Cutter Head wanted by giving the Fig. number so as to avoid mistakes or delays.

Special Heads for Making Glue Joints.

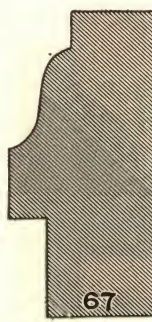
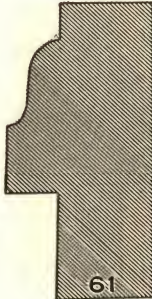
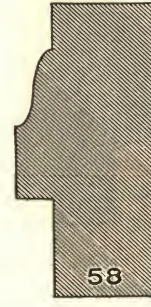
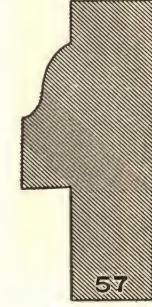
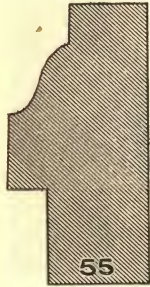
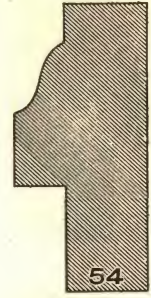
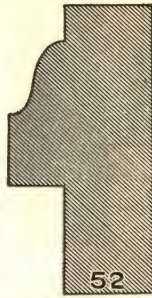
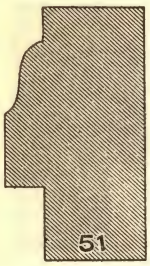
We represent on page 75 some leading designs of Glue Joints, for working which we have made Special Heads with Circular Bits. Any one familiar with this class of work appreciates the value of close and well matched pieces that fit snugly when put together. The Shimer Cutter Heads apply to this work, retaining the advantages of the alternate shearing cut and side clearance to the Bits.

Prices of these Heads will be made known on receipt of particulars as to the pattern desired and the measurements of machine on which they will work.

Patterns of Sash Moulding.



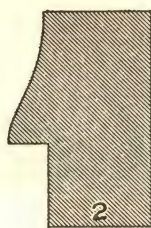
Patterns of Sash Moulding.



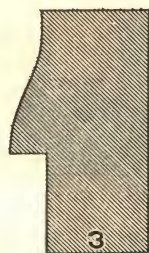
Patterns of Sash Moulding.



1



2



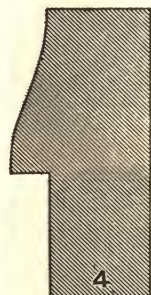
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10



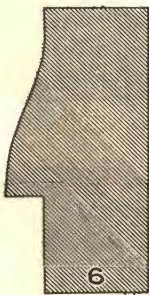
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4



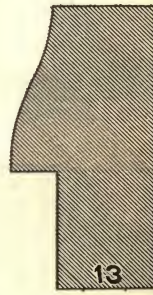
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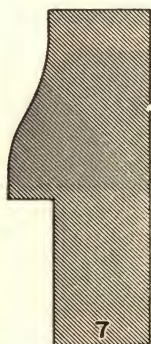
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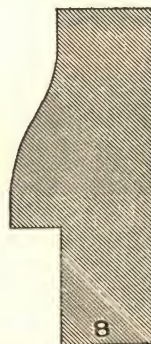
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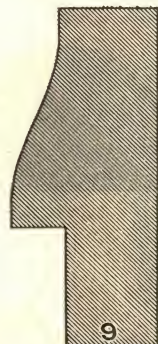
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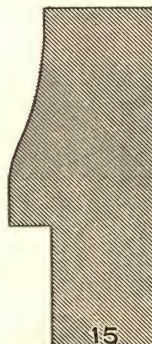
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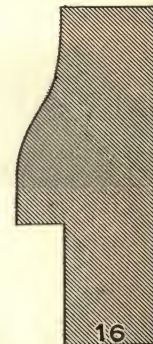
8



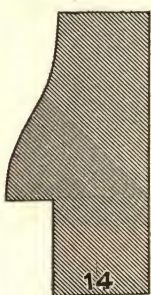
9



15



16



14



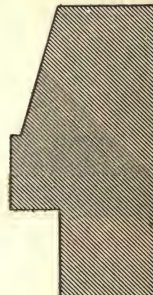
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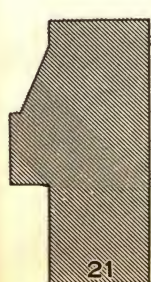
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19



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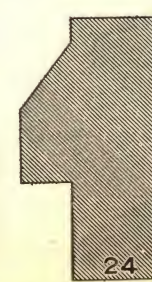
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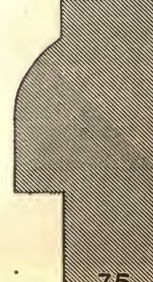
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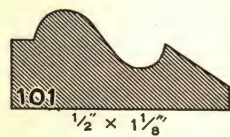
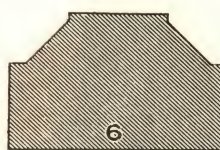
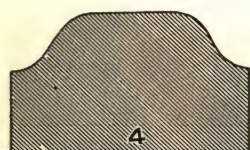
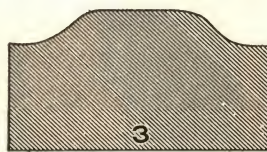
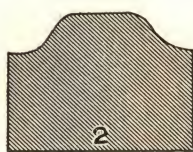
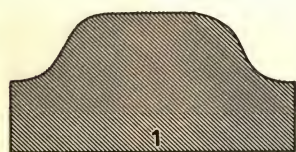
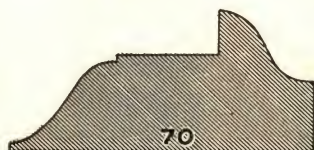
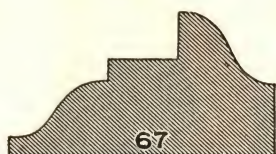
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24



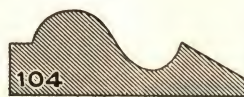
75



$\frac{1}{2}'' \times 1\frac{1}{8}''$



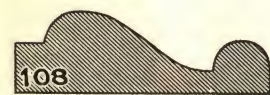
$\frac{3}{8}'' \times 1\frac{1}{4}''$



$\frac{1}{16}'' \times 1\frac{1}{4}''$



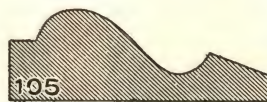
$\frac{3}{8}'' \times 1\frac{1}{4}''$



$\frac{7}{16}'' \times 1\frac{3}{8}''$



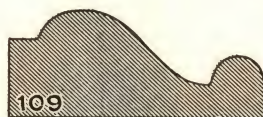
$\frac{1}{2}'' \times 1\frac{7}{16}''$



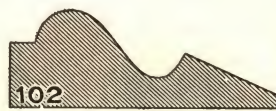
$\frac{7}{16}'' \times 1\frac{3}{8}''$



$\frac{5}{8}'' \times 1\frac{3}{8}''$



$\frac{9}{16}'' \times 1\frac{3}{8}''$



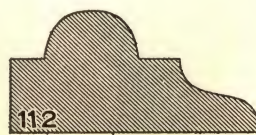
$\frac{1}{2}'' \times 1\frac{1}{4}''$



$\frac{3}{4}'' \times 1\frac{1}{16}''$

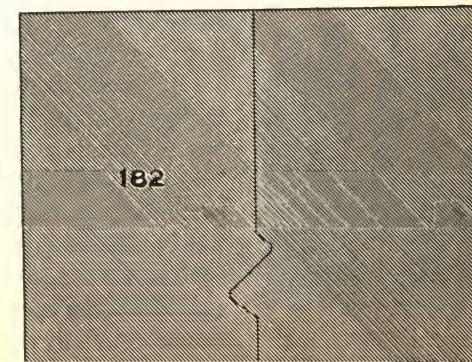
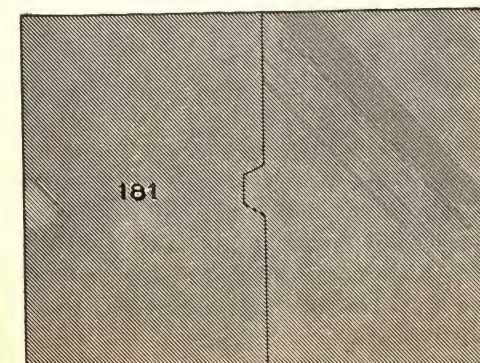
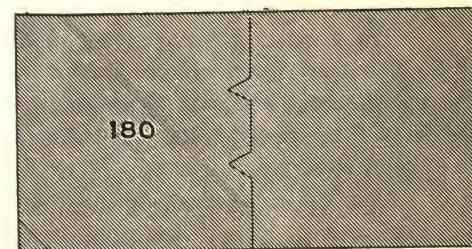
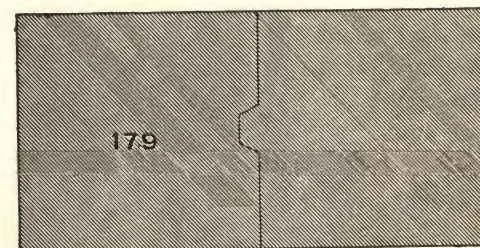
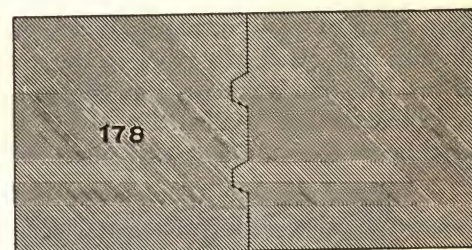
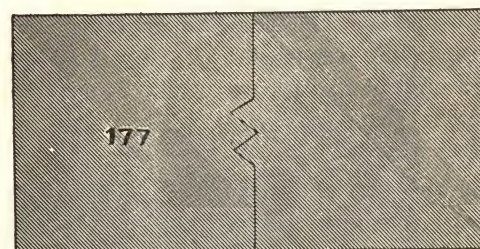
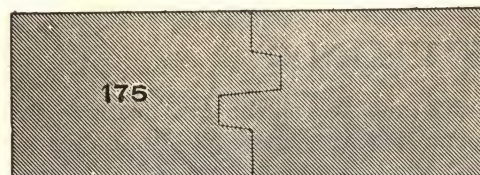
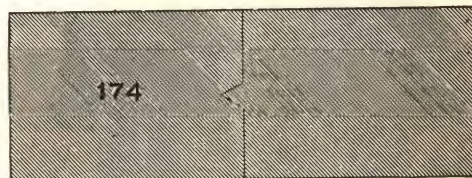
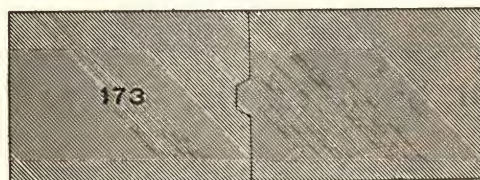
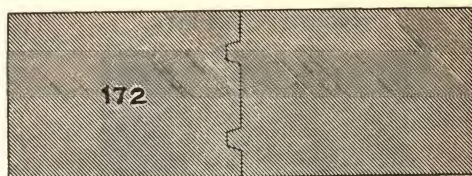
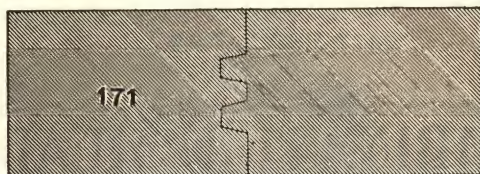


$\frac{1}{8}'' \times 1\frac{5}{8}''$



$\frac{5}{8}'' \times 1\frac{1}{4}''$

Glue Joint



HEAD WITH SASH BITS.

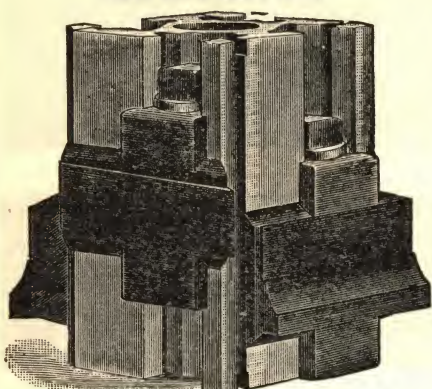


FIG. 88.

✧•NEW•✧

COMBINATION HEAD

—FOR—

Door, Sash, Blinds,

and Mouldings.

✧•DESCRIPTION•✧

THE COMBINATION HEAD is a make-up that embodies all the good features that have served to make the "**Shimer Heads**" popular, and is placed upon the market to meet the wants of the smaller Sash, Door and Moulding Mills, *but not to supercede the Shimer Standard Tool*. TO ALL THAT WORK ON STOCK, and have every-day use for a Head to work Standard Door or Sash, we would say, run the Shimer Head with Circular Bits (that will give you the greater wear before it is used up). But to those of you who find it necessary to change work several times a day, we would advise that you consider the peculiarities of the Combination Head—first, because of its cheapness; next, because of its merits.

When the bolt that clamps the vise on this Bit is loosened only enough so you can slide the Bit easy, you can locate the Bit anywhere along the line of slot, and scale rule or gauge indicates the position and registers its adjustment.

The important features that make up the *good record of the Standard Shimer Heads with Circular Bits*, are, viz: the alternate cut and side clearance for the Bits, given by means of the inclined seats. For illustration, we refer you to page 7, Fig. 3.

Now, please study the illustrations herewith submitted, and make comparisons. You will find that four Bits are employed

(see Fig. 93), two in upper and two in lower line of work, making an *alternate cut* and a *division of chip*; therefore, *Head runs easy*.

Next, examine the feature of side clearance, as illustrated by means of Fig. 90, showing one Bit taken from the upper and one Bit taken from the lower line of cut, and placed side by side. The Bits are in line with each other as to their fastenings, but the parts that cut the groove bear to the right and left of the base line of the Bit, making line A B longer than line C D; the difference in the length of these lines marks the side clearance, and guarantees an easy cut and a permanent shape to the Bit, that is moulded to suit the work it is to do.

Head, with Door Bit and Gauge.

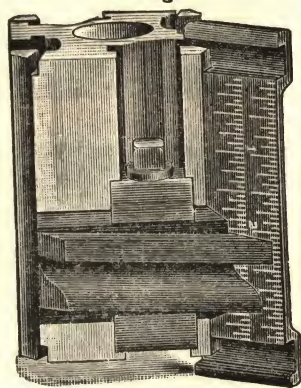


FIG. 89.



FIG. 90.

Combination Head with Bits for Making Doors.

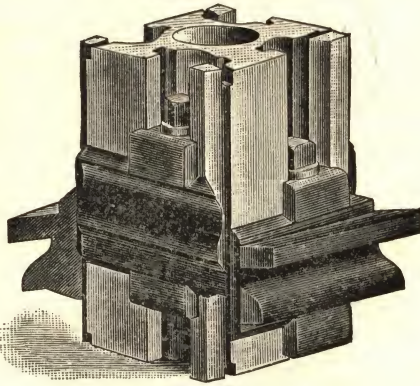


FIG. 91.

Bottom View of Head.

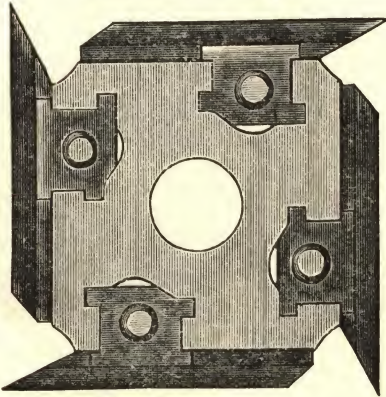


FIG. 93.

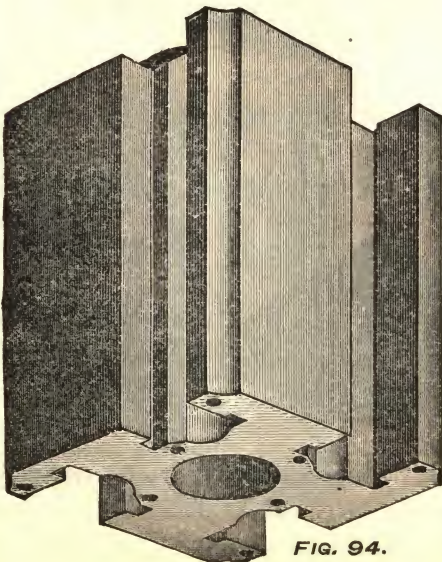


FIG. 94.

These Bits when at work,

Overlap, so that the Groove is made $\frac{3}{8}$ of an inch wide, or any width that may be desired. The overlap is not always necessarily central, but can be at any point, and we therefore divide the cut upon the *clearance line*, giving the Bits a clearance lead, and it is this feature that makes

This Head, with its combinations, applicable to every class of work.

One Head will, therefore, take Bits to make *Door*, *Sash*, and various other mouldings, and these BITS ARE QUICKLY and ACCURATELY CHANGED and adjusted by the use of a gauge.

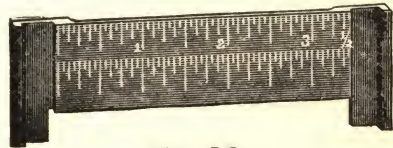


FIG. 92.

This Gauge fits in two small slides over the corners of the Head, and stands at same angle the Bits are filed to from under side. It becomes at once a gauge to file the Bits to and a gauge to register the adjustment of the Bit to work thick or thin pattern. See how it is applied to the Head, page 76. Further explanation is hardly necessary.

The Strength of this Head Admits of no comparison.

It is positively, the strongest combination for a slotted Head ever brought out. The slots are along the edge of the side nearest the cut.

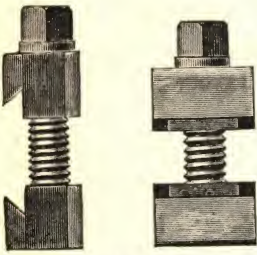


FIG. 95.

The bolts that hold the Bits are all within the slots.

The Bits are clamped against the sides of the Head by means of little vises, that take their position at any point along the line of the slot, wherever they are drawn up.

They operate upon the principle of the wedge, seating the Bit upon its under, flat side, by means of the bevel upon the jaws (see Fig. 95. and the other illustrations herewith, showing their several applications).

This Head has a Very Wide Range of Usefulness.

It is shown here as applied to **Crown Moulding**, by way of illustration ; its special application is on a combination of Bits not over two inches wide, arranged as above shown to produce the special moulding or casing required.

For deep mouldings extension vises are used. The Bits are not run out in line with the Head, to make the deeper cut, but built up by means of the vises, and the Bits that work the greater depth have, therefore, the same relative position, as to cut, as have the Bits that work on the smaller circle.

A Head is complete with four vises and four Bits ; and suitable Gauge and wrench goes with each order.

In order to further illustrate the usefulness of this tool, we here represent a Moulding Head, (Figs. 98 and 101), having two sides slotted in the ordinary way, suitable for bolts to hold common surfacing knives, and the other two sides slotted and arranged for the vises to hold our moulded knives.

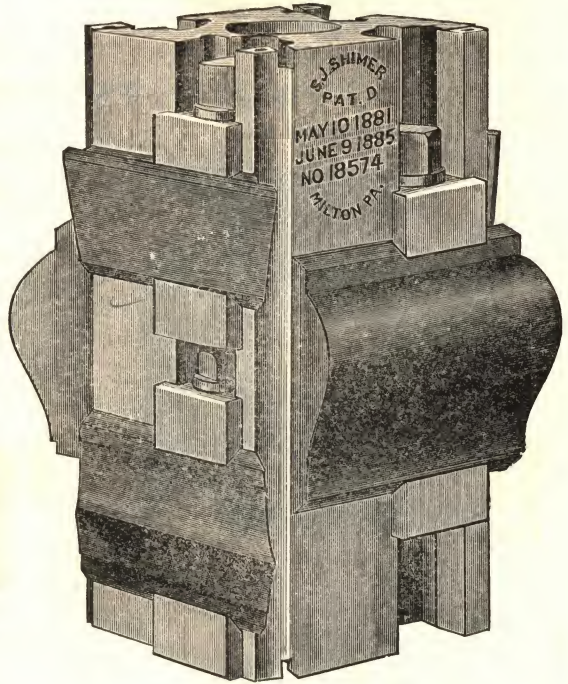


FIG. 96.

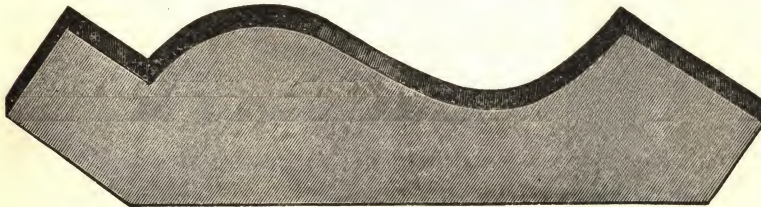


FIG. 97.

Section of Crown Moulding as made with Head, Fig. 96.

We also illustrate samples of the work they do, showing part of the mould with plain surface, balance moulded. The plain surface is produced by means of the surfacing knives and the moulded portion of the cut by the moulded knives, as attached to the Heads.

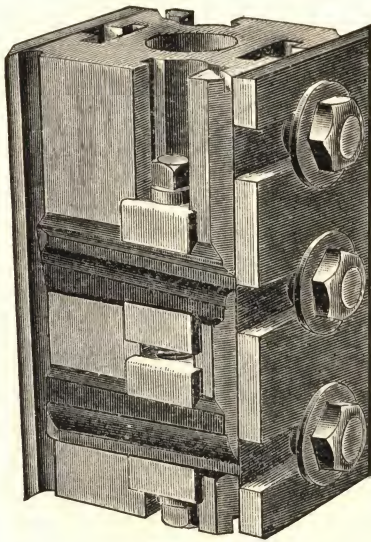


FIG. 98.

Arranged in this manner,
the Cutters produce the
smoothest work.

The Moulded Cutters, cutting the deeper, finish
their work first, and are followed by the surfacing
knives, which smooth up all rough or furred edges.

The convenience of thus arranging the Cutters
cannot fail to meet the appreciation of every practical
man.

No moulding knives
to file down to
shape—to fit
and try—

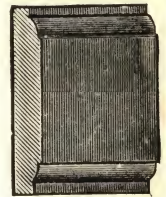


FIG. 99.

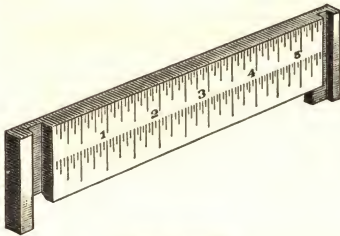


FIG. 100.

as these are filed only on their faces to sharpen, ac-
cording to the angle designated by the gauge, in-
suring positive uniformity of cut. The surfacing
knives are, of course, sharpened in the ordinary
way—from the back.

Any inquiries
cheerfully answered.

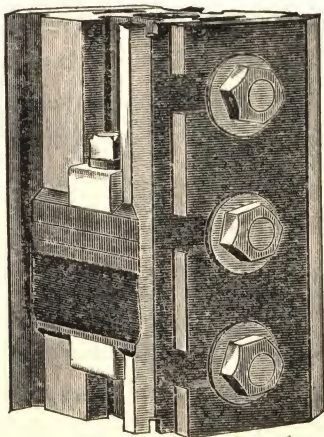


FIG. 101.

Fig. 101 is, in every respect, same
as Fig. 98, with the exception of a dif-
ferent application of Moulded Cutters.
(See pattern, Fig. 102.)

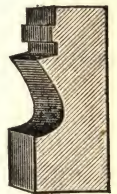


FIG. 102.

✱—PRICES—✱

<i>Sash Head, Fig. 88</i>	\$17.00
<i>Door Head, Fig. 89</i>	18.00
<i>Sash Bits, per set</i>	5.00
<i>Door Bits, per set</i>	6.00
<i>Special Head, Fig. 96</i>	28.00
<i>Special Heads, Figs. 98 and 101</i>	23.00
<i>Average Moulding Bits, each</i>	1.50
<i>Average Vises, Fig. 95, each</i>	1.25
<i>Gauge</i>	1.00

The Shimer. — — Trapezoidal Head.

Patented March 3, 1896, and numbered 555,741.
555,742.
555,743.

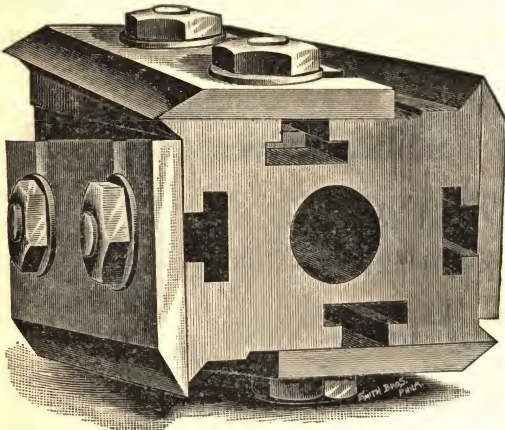


FIG. 207.

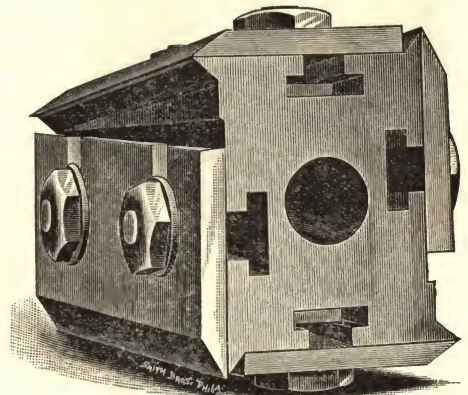


FIG. 208.

The engravings above were reproduced from photographs of an 8-inch Surfacing Head working to a 6-inch surface cut diameter, and illustrates the two inversely flattened ends of the same Head.

The lead or shear on the edge of an 8-inch planer knife for this Head is $\frac{3}{4}$ of an inch. It will be noticed the Head has four knives. The cut is made with one knife first, shearing the chip in one direction across the face of the board, and is followed by the next knife which shears the chip in the opposite direction across the face of the board—thus each alternate cut will be made from left to right, and from right to left.

All surfaces formed by means of rotating cutter heads are made up of innumerable incuts or waves upon the face surface, noticeable in proportion to their minuteness, and it follows that

**The more varied the direction of the cut,
The more nearly uniform will be the surface.**

It will be observed that the Head has trapezoidal faces alternately arranged and alternately inclined toward and away from the axial line of the Head in two directions to make the cut from right to left and from left to right diagonally across the face of the board, thereby lessening the tendency of chipping out lumber which is cross-grained and modifying the incuts on the surface made by a rotary cutter head by a draw cut diagonally in alternate opposite directions.

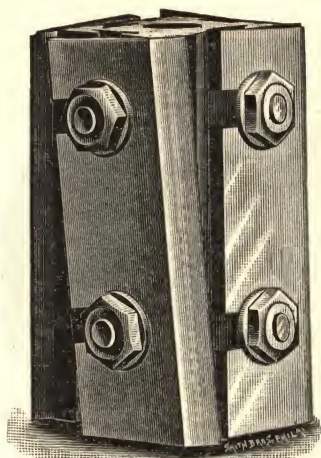


Fig. 209.

On Trapezoidal Cutter Heads with knife seats **FLAT** Longitudinally,

The four alternately inclined chip breaks become convex on their edges and conform in curvature to the surface of a cylinder common to the circle described by the surface cut of the planer knives secured to the Head. The knife edges must be given the same curvature and are set out from the edge of the chip break 3-16 of an inch to surface.

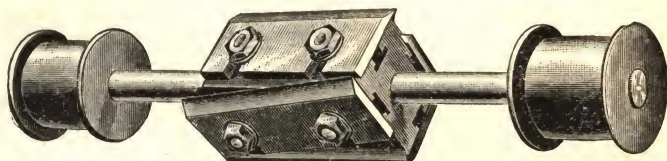


Fig. 210.

On Trapezoidal Cutter Heads with Knife Seats **CONVEX** Longitudinally,

The four alternately inclined chip breaks have their one way convexity planed to a straight edge from end to end of the Head. To this Head we fasten the *regular planer knife* (straight on its edge) to an edge curvature the flat way, to conform to the convexity given the knife seat to cut *at all points equi-distant from the center line of the Head*, and each knife is set out from the straight edge on the chip break 3-16 of an inch to surface.

This construction we prefer because it is easier to keep a knife in order that is straight on its edge and it is easier to set a straight knife to line with a straight edge on the chip break. We will, therefore, furnish this Head on your order if not otherwise directed.

Our patents cover every principle of alternate shearing cut to surface on the Trapezoidal Heads. Beware of infringements.

Price of Trapezoidal Surfacing Heads.

(Subject to Change without notice.)

Length of Head in inches.	Surface Cut Diameter in inches.	PRICE.	Length of Head in inches.	Surface Cut Diameter in inches.	PRICE.	PRICE For Head and Journals Forged in One Piece.
		Steel forged Head bored to fit Spindle. Without Knives.			Steel forged Head bored to fit Spindle. Without Knives.	
6	4 to 5	\$18.00	11	6 1/4 to 7	\$28.50	For Head and Journals forged in one piece, add to the price quoted on Head bored to fit spindles, \$10 to \$15 to cover the cost of the journal portion.
6	5 1/4 to 6	19.50	12	4 to 5	27.00	
6	6 1/4 to 7	21.00	12	5 1/4 to 6	28.50	Correct estimates made on receipt of specifications.
7	4 to 5	19.50	12	6 1/4 to 7	30.00	
7	5 1/4 to 6	21.00	13	4 to 5	28.50	Drive pulleys extra if we are to furnish them.
7	6 1/4 to 7	22.50	13	5 1/4 to 6	30.00	
8	4 to 5	21.00	13	6 1/4 to 7	31.50	We prefer to furnish the first set of planer knives, if trial orders are given. Knives at manufacturers' prices.
8	5 1/4 to 6	22.50	14	4 to 5	30.00	
8	6 1/4 to 7	24.00	14	5 1/4 to 6	31.50	
9	4 to 5	22.50	14	6 1/4 to 7	33.00	
9	5 1/4 to 6	24.00	15	4 to 5	31.50	
9	6 1/4 to 7	25.50	15	5 1/4 to 6	33.00	
10	4 to 5	24.00	15	6 1/4 to 7	34.50	
10	5 1/4 to 6	25.50	16	4 to 5	33.00	
10	6 1/4 to 7	27.00	16	5 1/4 to 6	34.50	
11	4 to 5	25.50	16	6 1/4 to 7	36.00	
11	5 1/4 to 6	27.00				

The Shimer Dado Head.

See directions for ordering
on page 60.

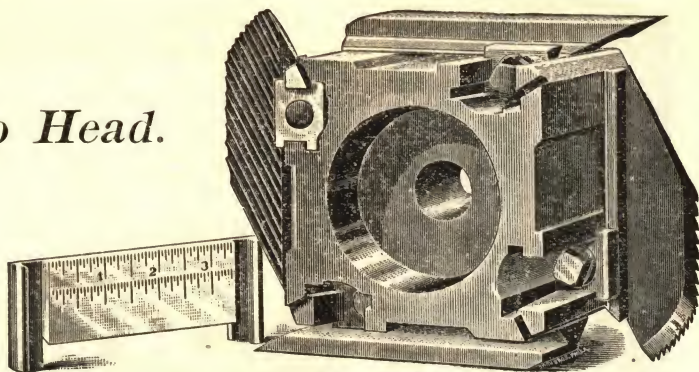


FIG. 103.

The above engraving represents our latest Dado Head, which is made upon the same principle as that of the New Combination Door, Sash and Moulding Head. This Tool is especially adapted to that class of work where grooves are to be made across the grain of boards, or lumber, as used for making frames, boxes and the like. All work done by it is perfect—no ragged edges, but all cleanly and smoothly cut, even under the fastest feed.

The Bits can be expanded for wider grooves, or contracted for narrower groove. Each set of Bits will work nearly double the thickness of one of said Bits; for instance, a set of Bits half an inch wide each will make a groove fifteen-sixteenth of an inch wide, or they can be set to work any intermediate width from one-half to fifteen-sixteenths inch. Each Head is provided with a gauge, graduated by the sixteenths, eights, &c., of an inch, as per cut, by means of which the Bits are adjusted to suit any groove within their range, with a certainty that they will make the desired width of groove, without first being compelled to try and set the second or third time before obtaining the desired result. This is a convenience of no little importance, and one that will be appreciated by every operator.

The gauge also designates the angle at which to file the Bits.

We make a yoke mandrel, with pulley and self-oiling boxes, suitable for a Head of this kind, for any parties desiring one.

This style of Head also applies to saw mandrels. For measure, give diameter of mandrel, size of both saw mandrel collars and space between them. Also, give the circle of cut the Bits should describe to suit the work on your machine.

Price, above Head, complete, with Bits	\$18.00
" Complete Head and Mandrel	24.00
" Extra Bits, per set, (2)	2.50
" Extra Saw Bits, per set, (2)	3.50

The Shimer Expanding Dado Head.

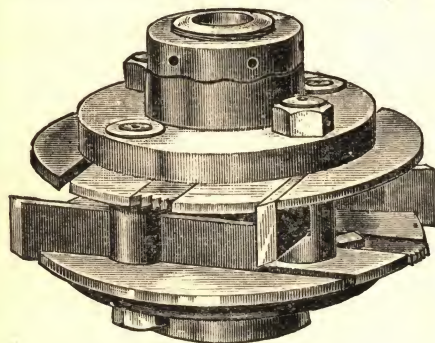


FIG. 104.

This engraving represents a new improved Dado Head, composed of two sections, and each section provided with two slotted bolts for the Cutters. The top section slides freely over the hub of the bottom section, and is adjusted by means of a nut that operates against a spiral spring coiled around the hub on the inside of the Head, between the two sections which expand the Head when the nut is unscrewed; and the adjustment is quick and accurate and is effected without loosening the Cutters or removing the Head from the spindle. The adjusting nut is automatically locked by the pressure of the spring upon a serrated joint, and there is no possible chance for the sections to become disarranged when in use, even though the set screw is not drawn up. The Head is fitted with Saw Bits for cutting the square off-set across the grain of the wood, and does its work without splitting up or tearing out. This

Head is six inches through hole; should work between bearings; cannot apply it to a mandrel shorter than six inches space for the Head. For measure, give the diameter of mandrel; also, give the circle of cut the Bits should describe to suit the work on your machine.

Price, complete	\$25.00
" Bits, per set, (4)	4.00

New Combination Moulding Heads.

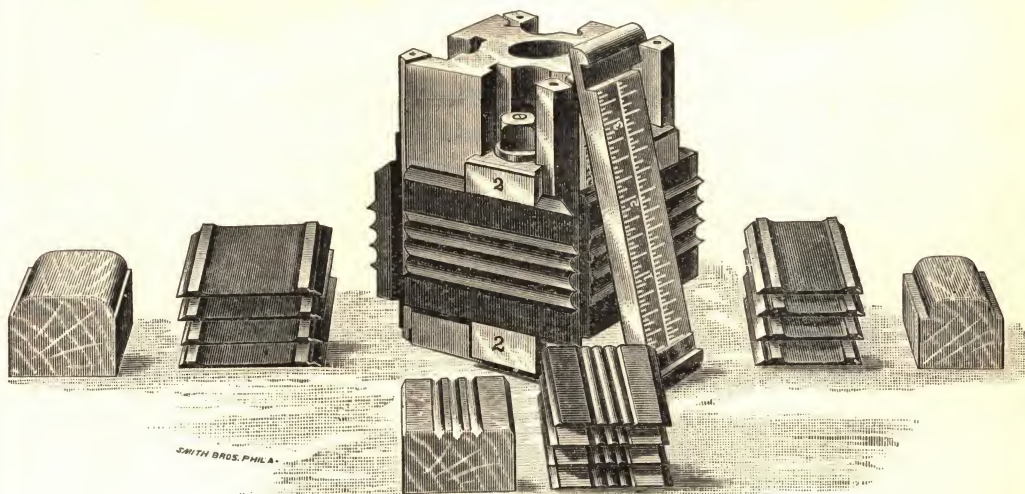


FIG. 105.

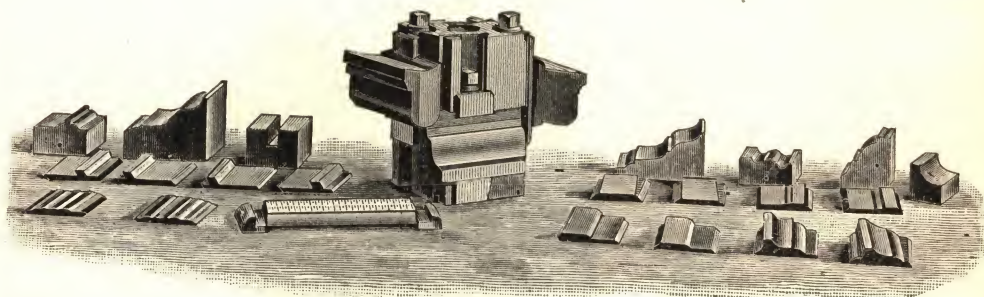


FIG. 106.

❖ DESCRIPTION ❖

The cuts above represent the **New Combination Head** as applied to the manufacture of mouldings. These tools like those represented on pages 76 to 79, are constructed with all the advantages of the alternate divided cut and side clearance to cutting edges.

They are complete, and will save many busy moments that you now consume in fitting the old style of knives.

There are thousands of patterns of mouldings to which these Tools will apply, and, when made, are a fixture that costs nothing to keep to shape. Try them on a few of your principal shapes.

Send Samples for Quotations.

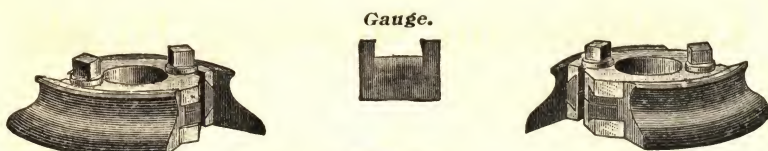


FIG. 107.

We here present cuts of a new Cutter Head, particularly adapted for use on Shaping Machine Spindles for any standard work. They are turned in upper and lower sections, out of the best machinery steel; therefore, are practically indestructible, and will, with ordinary care, last a lifetime. Each section is provided with a "V" shaped jaw, and when placed together, as shown in the cut, and the bolts drawn up, these jaws take a vise grip upon the Cutters, and hold them securely. The Head is so formed that it is impossible for any Cutter to get loose or fly out while in motion. The Bits are interchangeable with others of any pattern, ordinary width.

A Gauge for setting the Bits is carefully fitted to each Head, thus keeping the Head continually of the same diameter, and assuring perfect uniformity of pattern.

Price, per set, 2 Heads, complete, with Bits \$25.00
 " New Bits, per set, (4), width not exceeding one inch 10.00

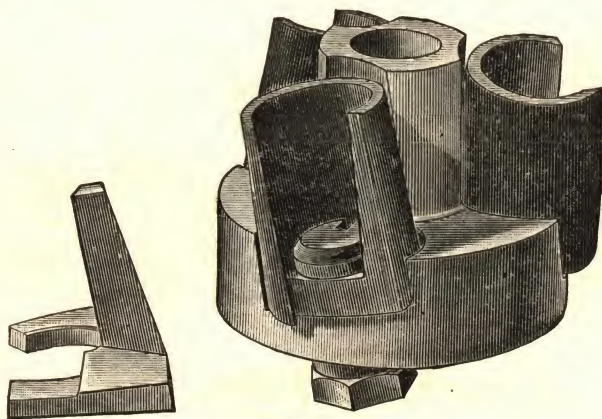


FIG. 108.

This cut represents a small-sized Jointer Head for use on a Shaping Machine, and differs only from our larger Heads for this purpose in the number of Cutters used. The larger Heads are made with four Bits in line of work, whereas, these have but three Bits in line of work. The excellent cutting qualities of this Head has made it a particular favorite.

The Bits are arranged to produce a draw cut—so difficult to maintain in any other style of Head. They are filed to suit the gauge, and will, therefore, produce a square joint in any lumber.

Positively the easiest running Jointer Head in the market.

Price each Head, to Joint $2\frac{1}{2}$ inch wide, \$14.00
 " " " " 2 " " 13.50
 " New Bits, per set (3), $2\frac{1}{2}$ inch wide 5.50
 " " " " (3), 2 " " 5.00

ROSETTE CUTTERS.

We here represent a few cuts of small Rosette Cutters, which are made up in the highest style of the art, and of the best cast steel. They do excellent work. Always order from a sample of rosette that you may have, or make exact drawing of the style of cut to be made in cross section. Give diameter and length of shank suitable for your chuck or socket.

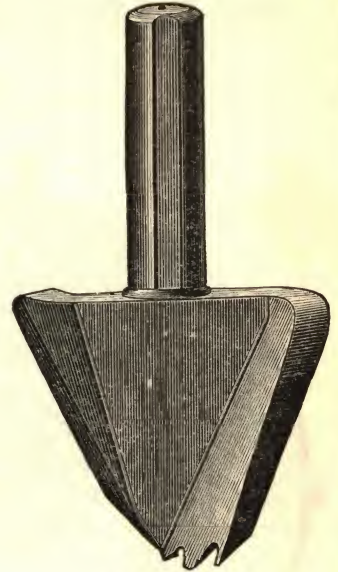


FIG. 109.

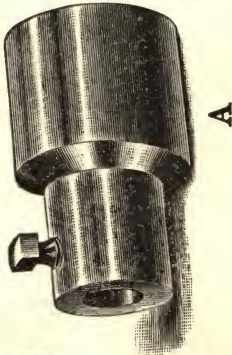
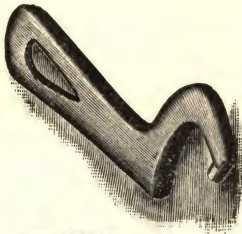
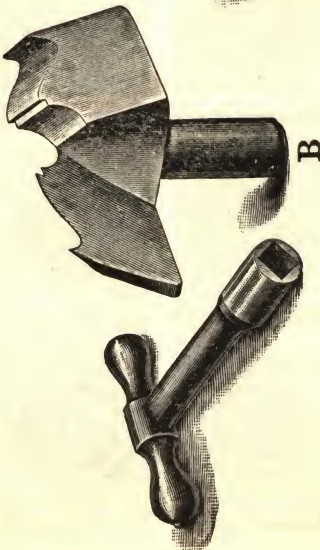


FIG. 110.



PRICES:

$\frac{3}{4}$ diameter,	\$1.75
$\frac{7}{8}$ "	1.90
1 "	2.00
$1\frac{1}{8}$ "	2.25
$1\frac{1}{4}$ "	2.50
$1\frac{3}{8}$ "	2.75
$1\frac{1}{2}$ "	3.00
$1\frac{5}{8}$ "	3.25
$1\frac{3}{4}$ "	3.50
$1\frac{7}{8}$ "	3.75

PRICES:

2 diameter,	\$4.00
$2\frac{1}{8}$ "	4.25
$2\frac{1}{4}$ "	4.50
$2\frac{3}{8}$ "	4.75
$2\frac{1}{2}$ "	5.00
$2\frac{5}{8}$ "	5.25
$2\frac{3}{4}$ "	5.50
$2\frac{7}{8}$ "	6.00
3 "	6.50

For making large Rosettes we recommend the use of the turning lathe. The cut "A" represents a chuck which is bored out and threaded to fit over the thread of the spindle; the other end of the chuck is bored straight through into which the stem of the cutter "B" is fastened with a screw. This makes a strong and rigid holding for the cutter, which must be free from any vibration or lateral motion. Use dry lumber and you will always have smooth and almost perfect work.

PRICES:

$3\frac{1}{8}$ diameter,	\$7.00
$3\frac{1}{4}$ "	7.50
$3\frac{3}{8}$ "	8.00
$3\frac{1}{2}$ "	8.50
$3\frac{5}{8}$ "	9.00

PRICES:

$3\frac{3}{4}$ diameter,	\$ 9.50
$3\frac{7}{8}$ "	10.00
4 "	10.00
Chuck	3.00

For Holding the Blocks Firmly while being cut,

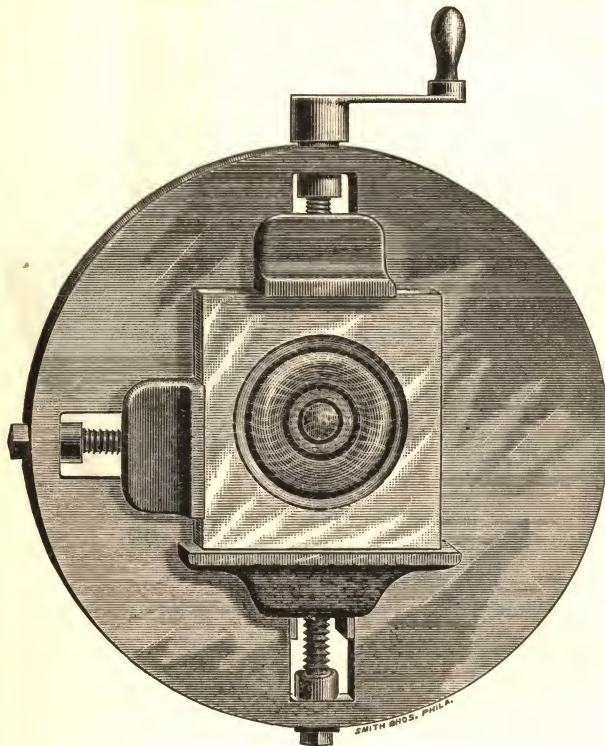


FIG. 111.

We represent in this connection our Face Plate with adjustable guides showing a block in position. This Face Plate is provided with a hub, which is bored out to fit over the spindle in the Tail-Stock of the lathe and is moved to and from the Cutter by turning the hand wheel at the rear of the Tail-Stock. It will be seen that by this means a complete and substantial machine for this purpose is within the reach of all, by simply adding the necessary tools we illustrate to your Turning Lathe.

Price, Face-Plate or
Chuck complete \$10.00

In giving order mention diameter of the Spindle in the Tail-Stock of your lathe, *i. e.* the outside diameter.

Name Number of Pattern you prefer, or send a wood sample.

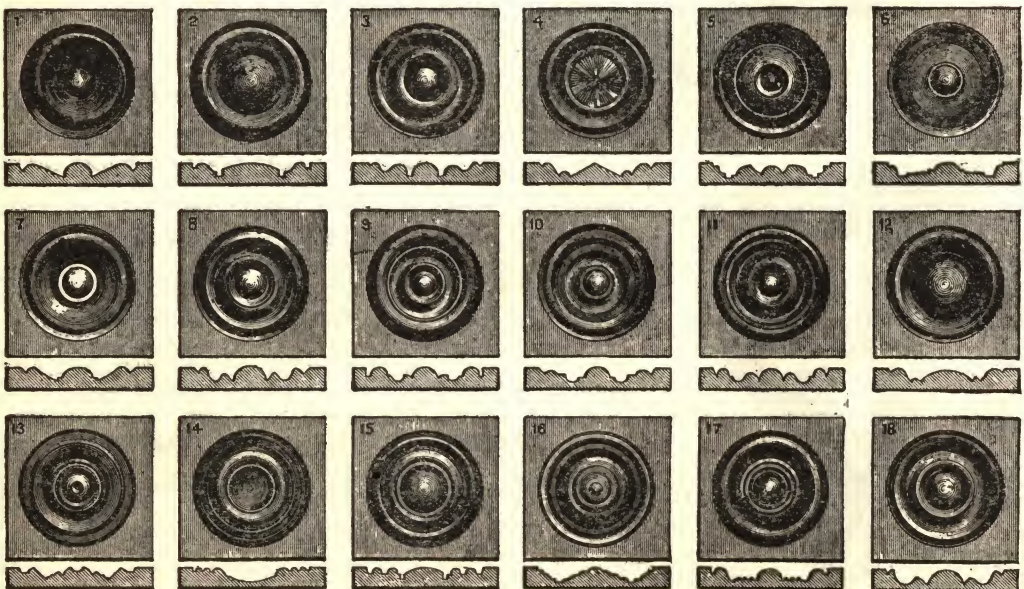


FIG. 112.

These Bits Raise Panels

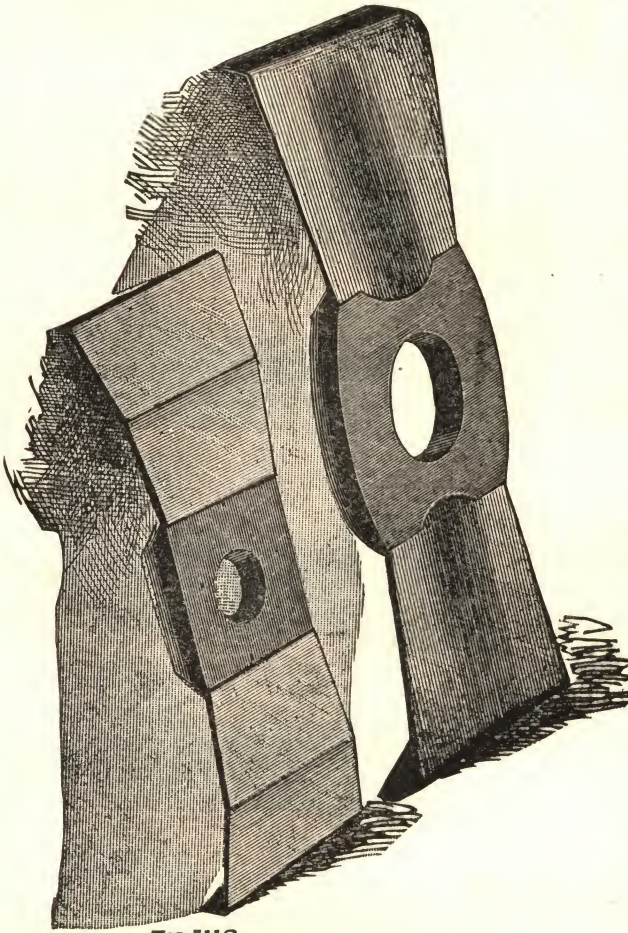


FIG. 113.

One side at a time and are made to fit any reversible Moulder. They are hollow ground; a rule crossing the Cutter (See Fig. 115) will rest on the opposite edges only, showing a concave opening for clearance to the cut.

Fig. 114 shows a block cut with one of these Cutters.

For Excellency of workmanship

And DURABILITY, these Cutters are unsurpassed; work free and easy, producing a *shear* cut, like your pocket knife.

We also make them to suit for Double Spindle Shapers. Positively the best to be had for the purpose.

On the following pages we illustrate some of the leading designs which may assist you in your selection.

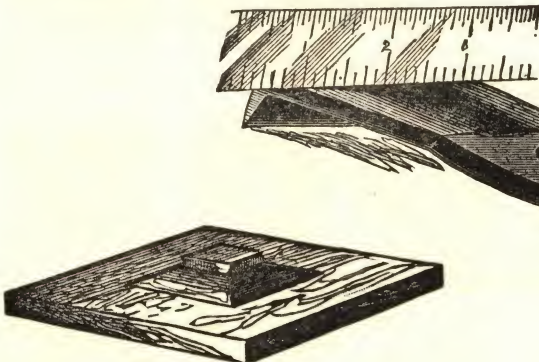


FIG. 114.

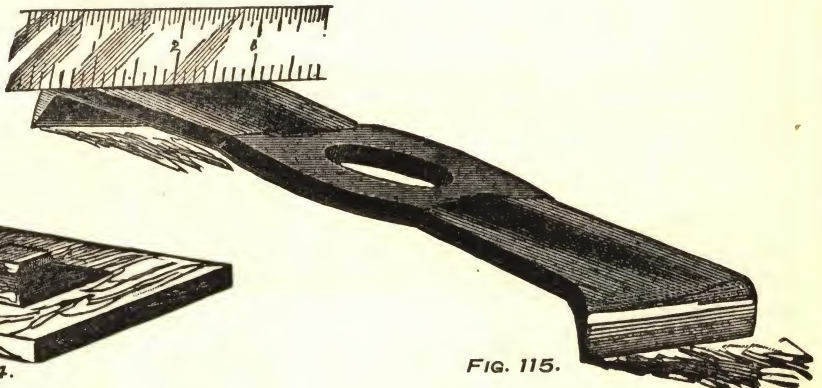
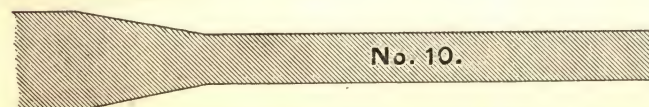
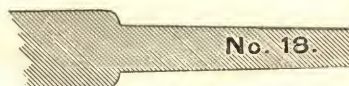
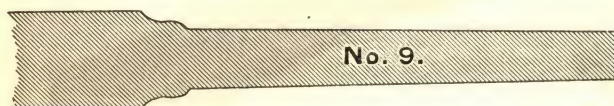
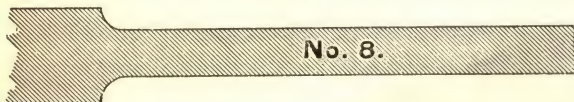
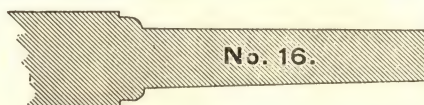
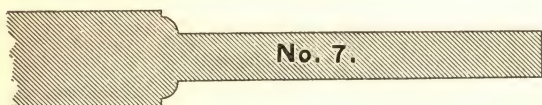
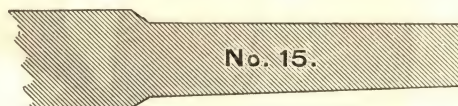
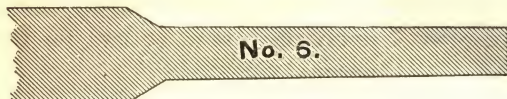
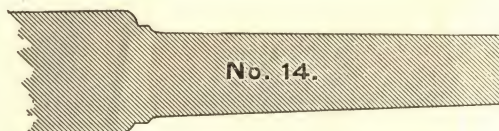
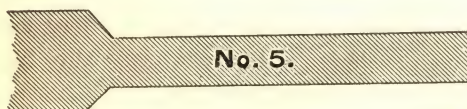
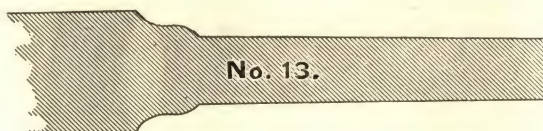
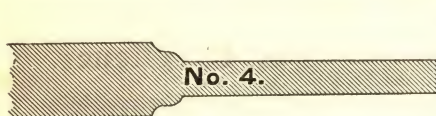
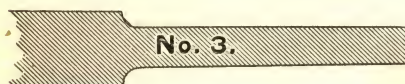
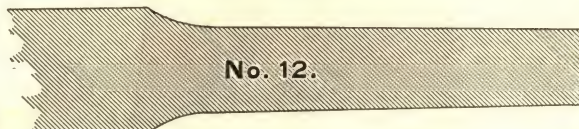
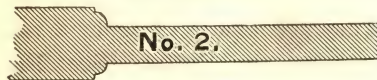
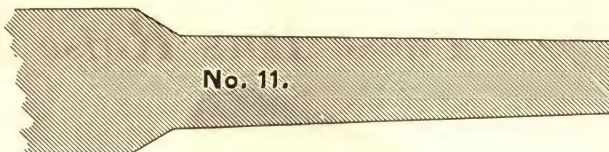
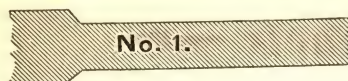


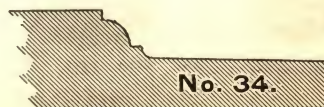
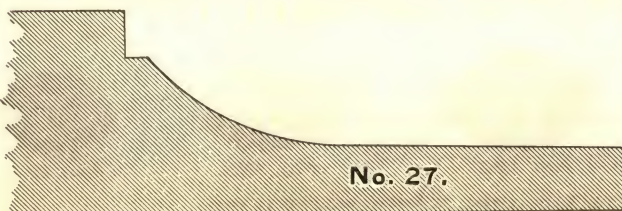
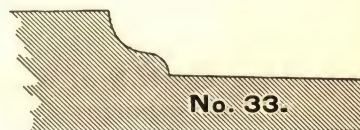
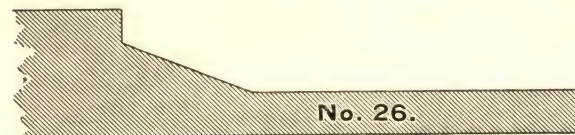
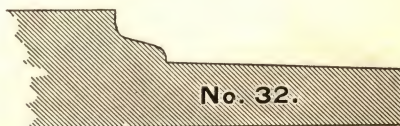
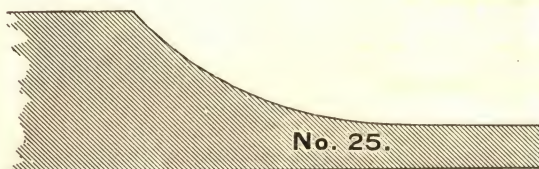
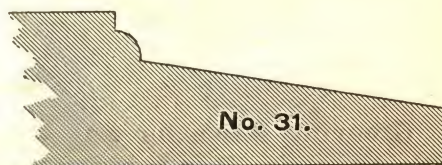
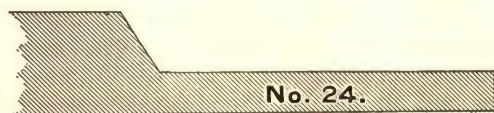
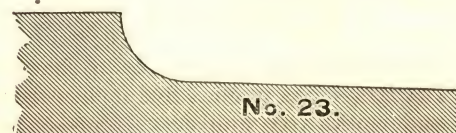
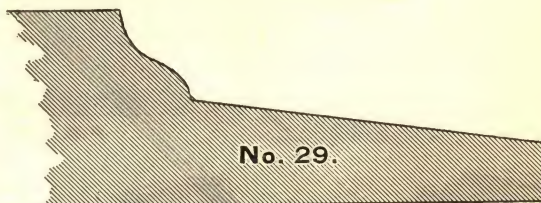
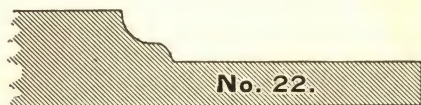
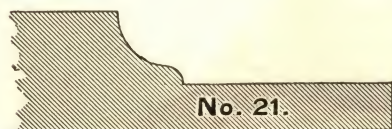
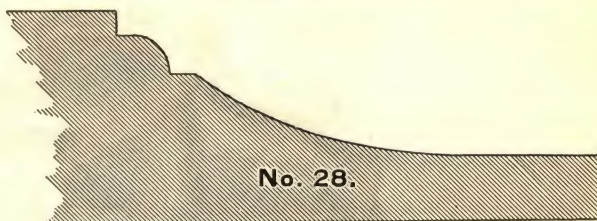
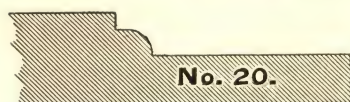
FIG. 115.

Price, each Cutter, to cut $1\frac{1}{2}$ deep,		\$4.00
" " " " 2 "		5.00
" " " " $2\frac{1}{2}$ "		6.00
" " " " 3 "		7.00

Patterns of Raised Panels



Patterns of Raised Panels



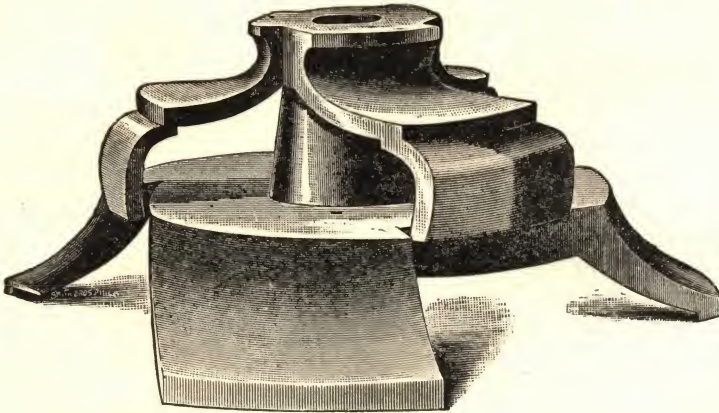


FIG. 116.

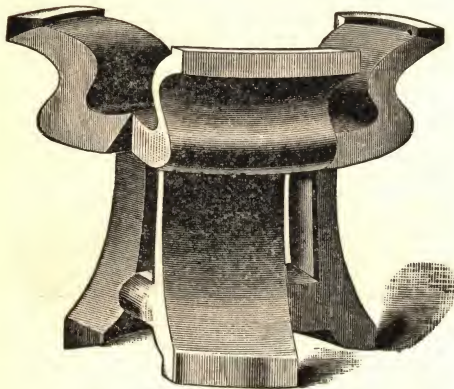


FIG. 117.

These engravings represent Cutters of larger proportions for casket factories, and are used on the Shaper spindles as here shown with collar between them. They are made in two parts for strength and convenience in sharpening. The larger one moulds five inches depth of cut and works free and easy, representing the highest degree of excellence. We cheerfully give prices on work of this nature.

These Cutters work one way only for double spindle Shapers, for which class of machines we make a full line of Cutters—all sizes and all shapes. Send specifications for prices. We can save you money.

Grooving Saws for any Shaper are made with dispatch. Prices given on application.

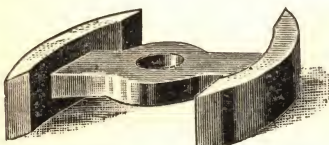


FIG. 118.

Fig. 118 represents style of our No. 50 Groover for Reversible Shapers, and is supplied on each order unless some other style is specified. The best Grooving Cutter made.

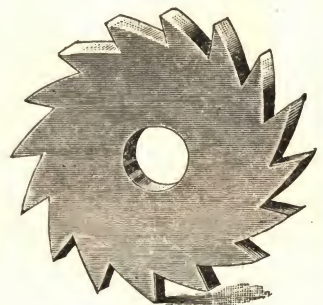


FIG. 119.

CARVING TOOLS of any shape desired, and for every purpose, made of superior **CAST STEEL**, and **WARRANTED**.



FIG. 120.

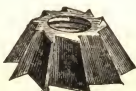


FIG. 121.

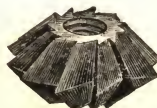


FIG. 122.



FIG. 123.

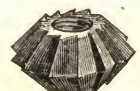


FIG. 124.

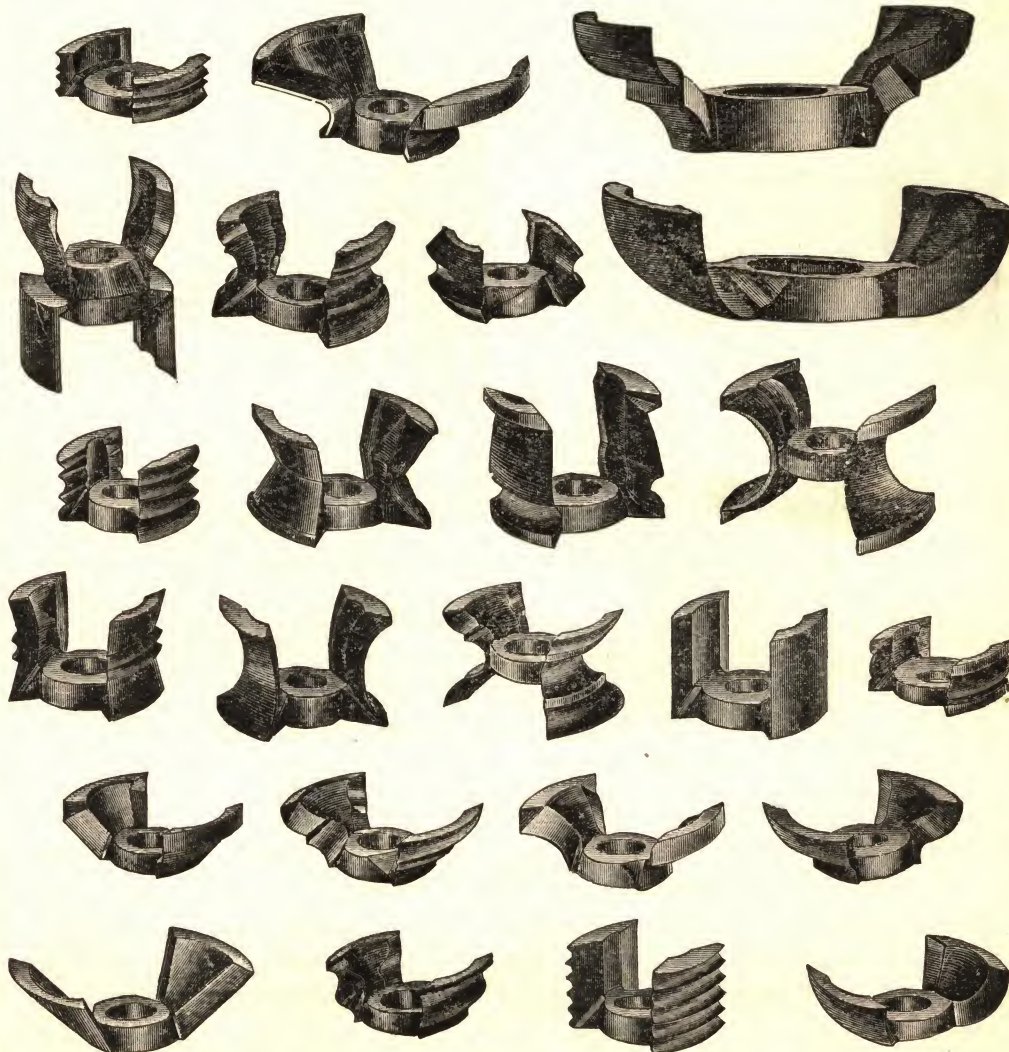
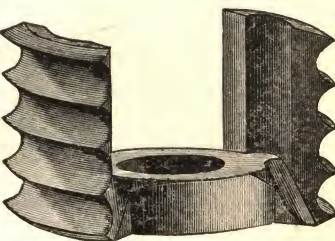
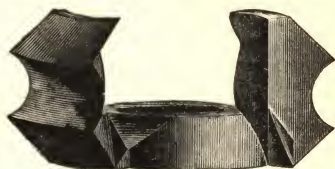
PRICES GIVEN ON APPLICATION.

Reversible Cutters

We propose, by the engravings shown on this page, to illustrate a few of our Reversible Cutters. You will observe they are sharpened from the inside, while the outside circle carries the shape of mould or pattern until the Cutter is worn out.

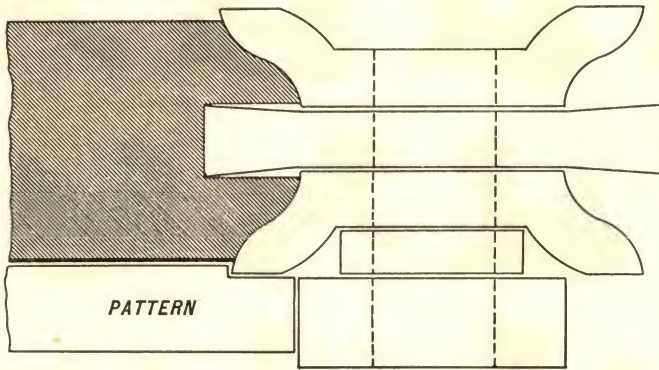
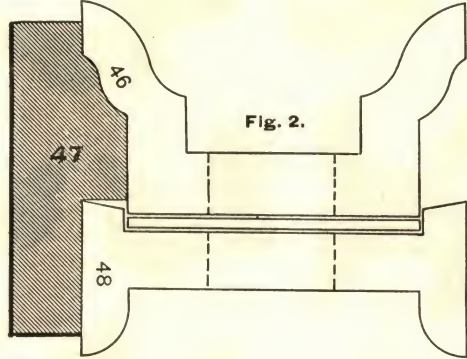
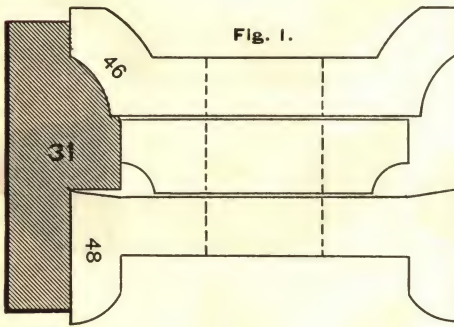
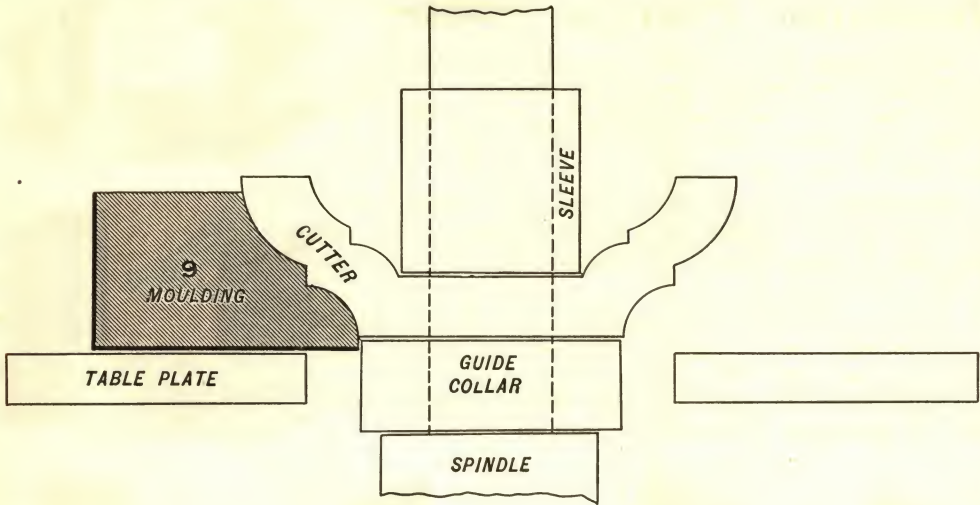
The shape to cut any certain pattern is worked into each wing of these Cutters on a larger circle than that on which the Cutter revolves, thus clearing the edges of *all* friction.

When you order, don't refer to the Cutters here shown, for they are not full size, but refer to patterns of mouldings shown on following pages, or send us drawings or sample blocks to work to, with size of spindle, and collar, if particular size of collars are used.



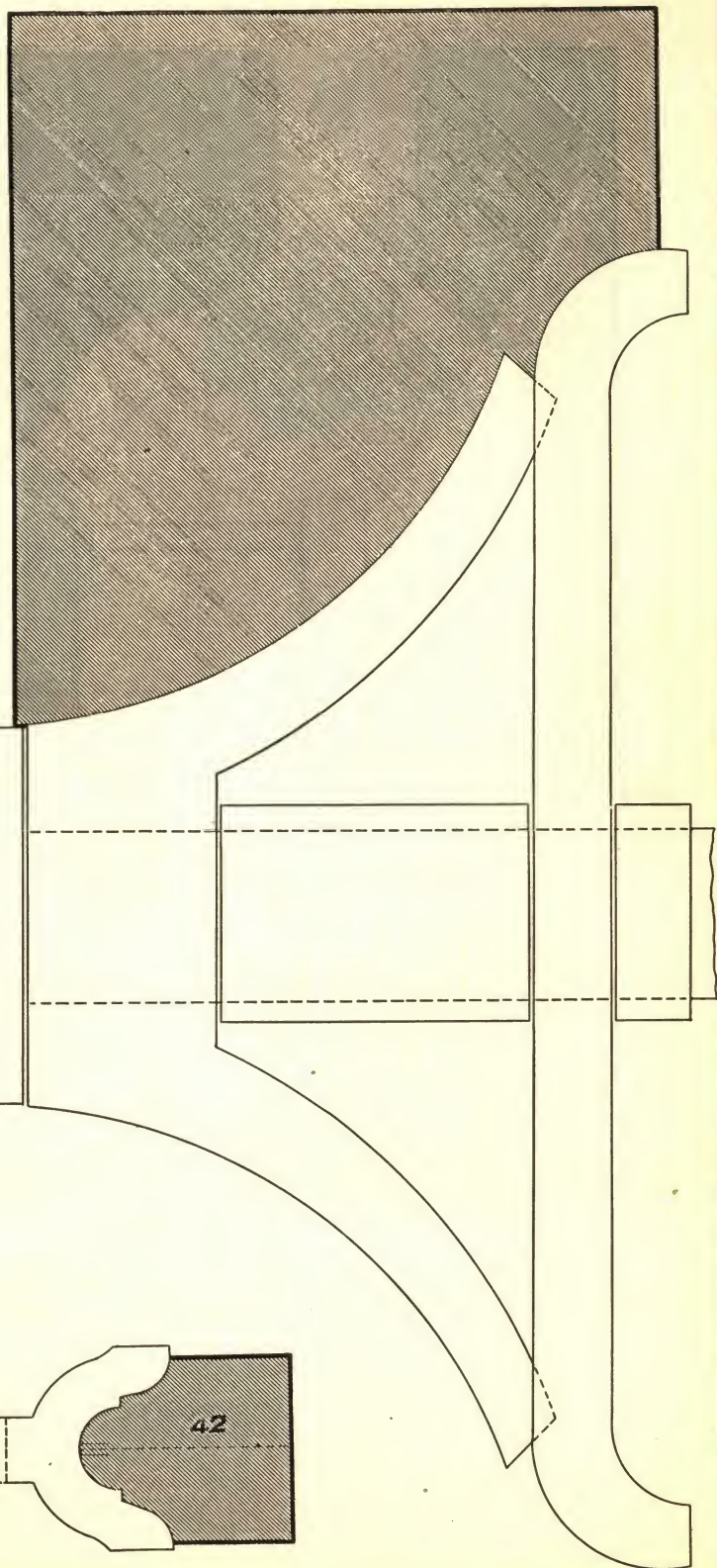
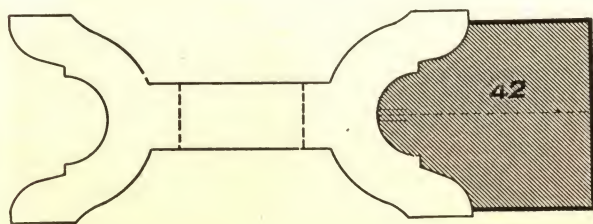
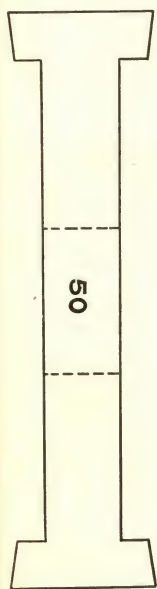
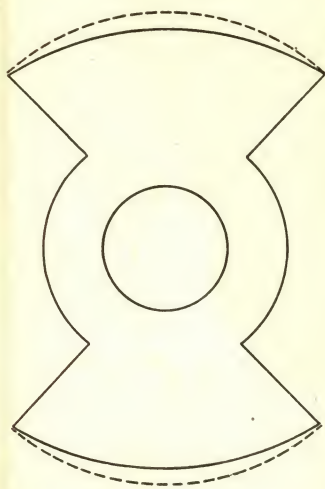
ORDER BY NUMBER. SEE FOLLOWING PAGES.

Edge Moulding Cutters

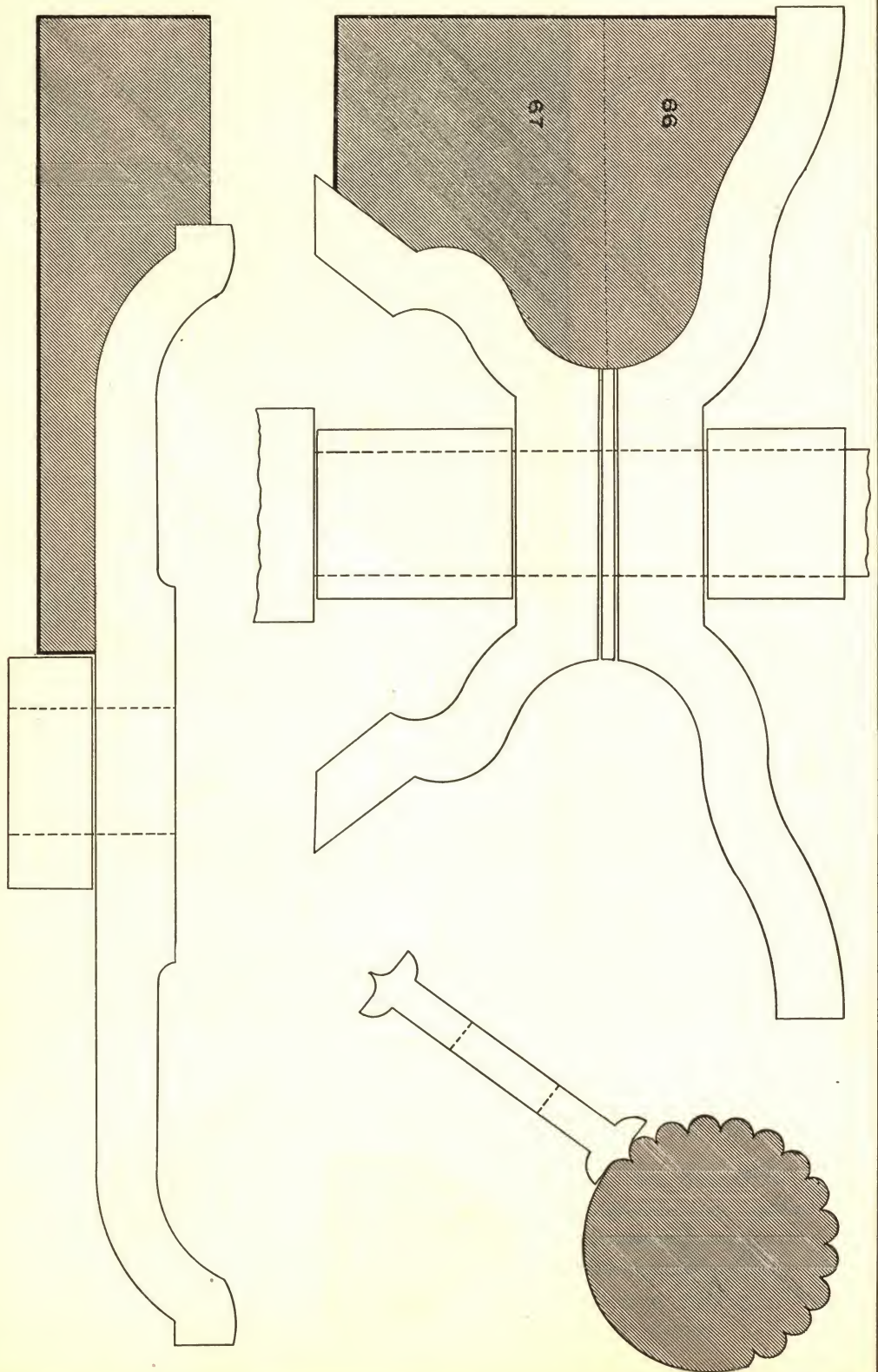


Above engravings show how the Cutters are fastened to the Shaper spindle, representing the two ways in general use, viz: that of passing the work against a guide collar, and that of fastening the work to a pattern guided by means of the collar. Fig. 1 shows how Circular Sash is made by the use of a guide collar to regulate the depth of cut and thickness of Sash. Fig. 2 represents style of Cutters when using a pattern, therefore, state which style you prefer in ordering.

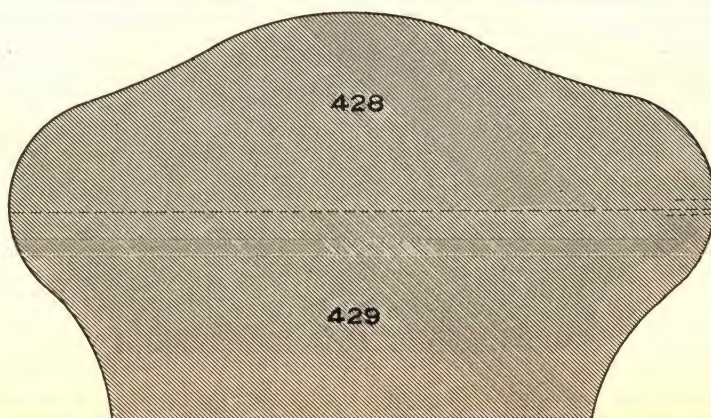
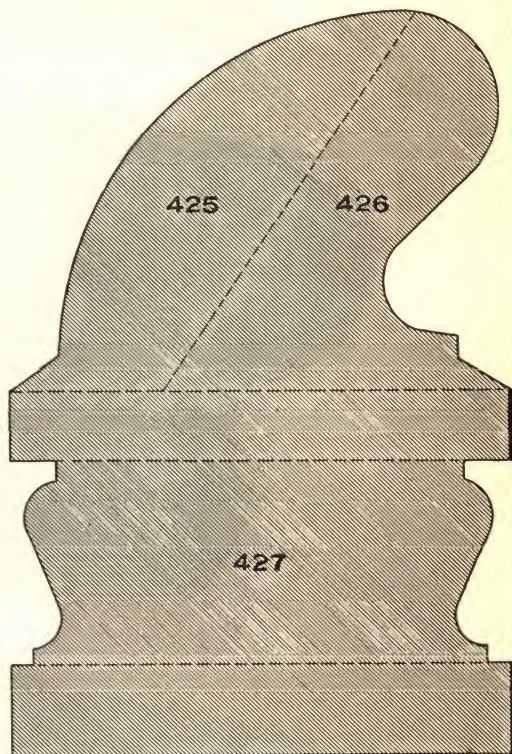
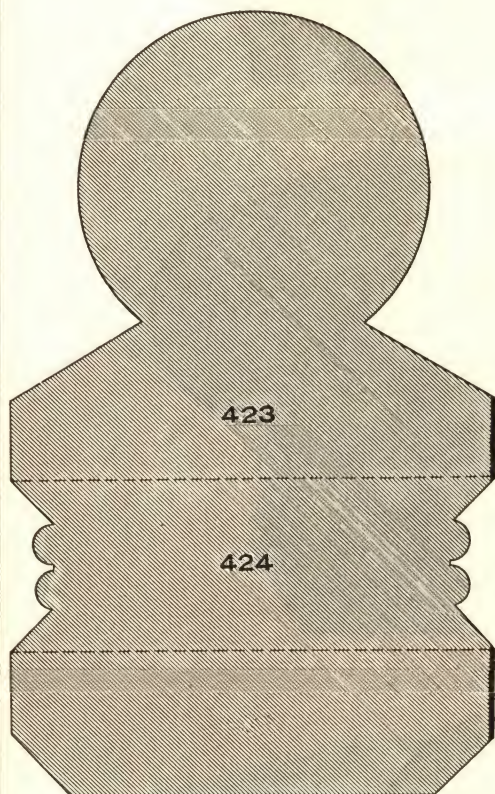
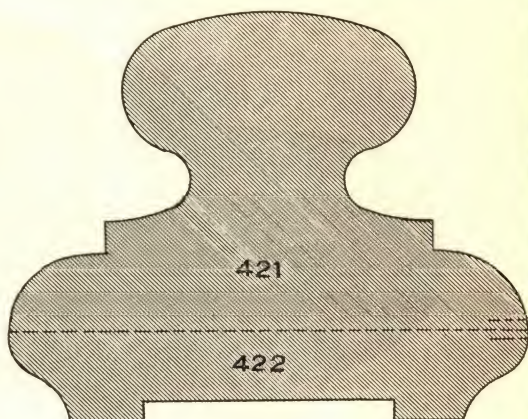
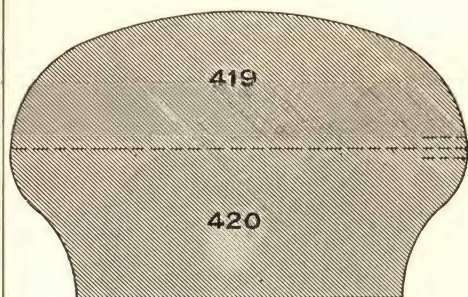
Edge Moulding Cutters



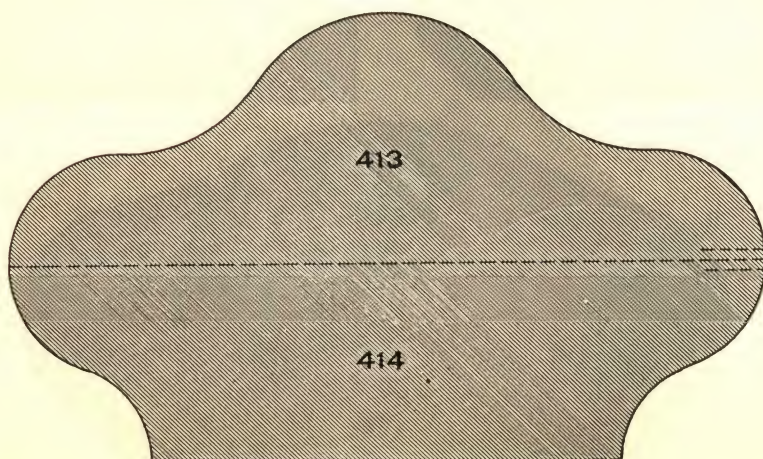
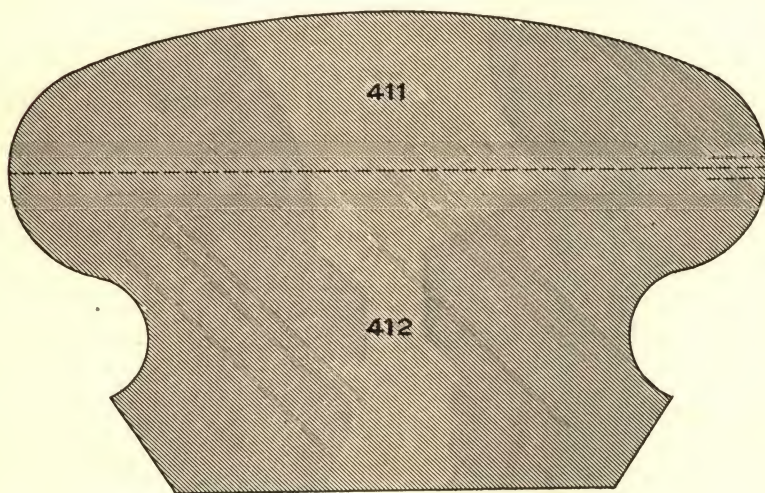
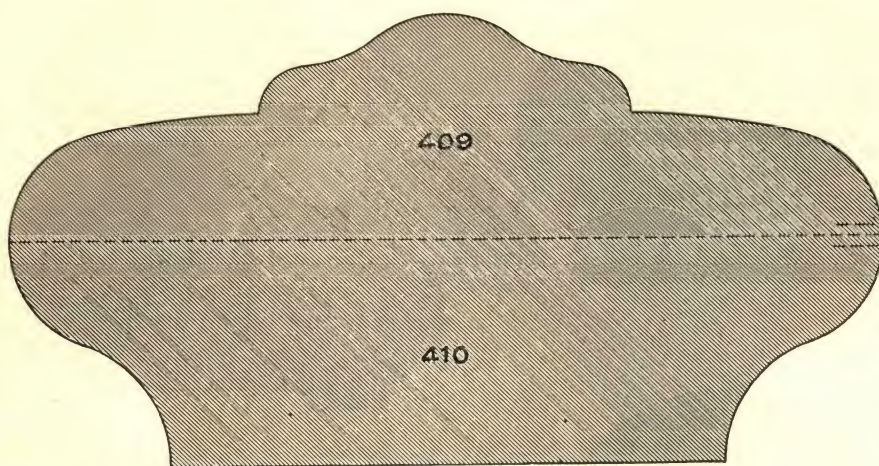
Edge Moulding Cutters



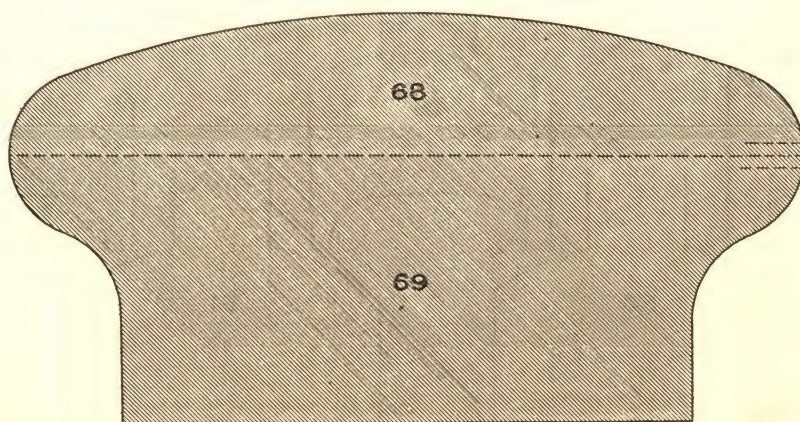
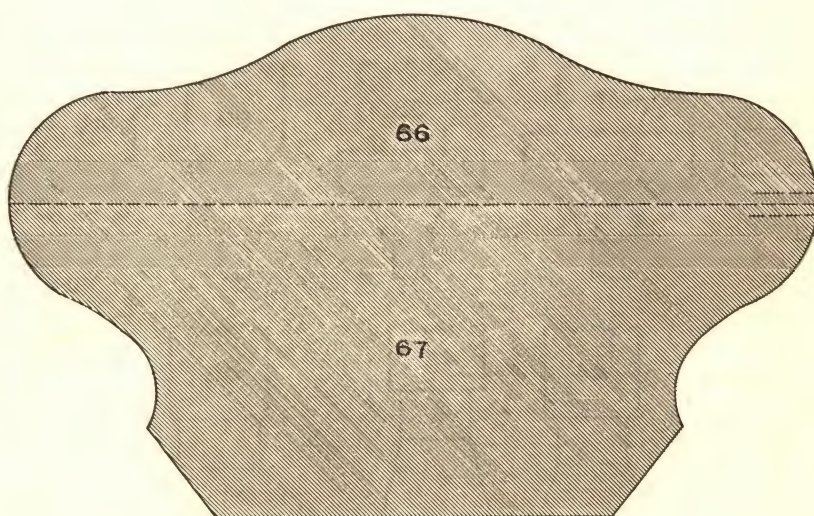
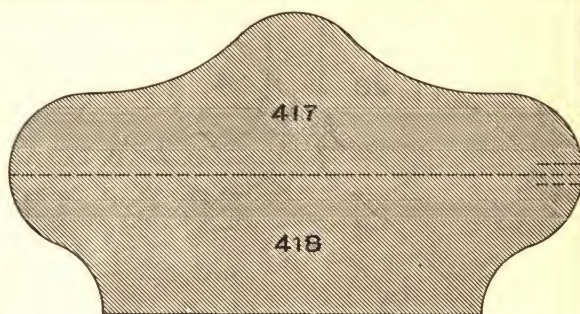
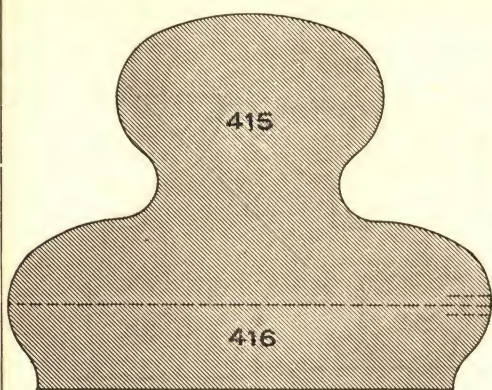
Patterns of Stair Rail



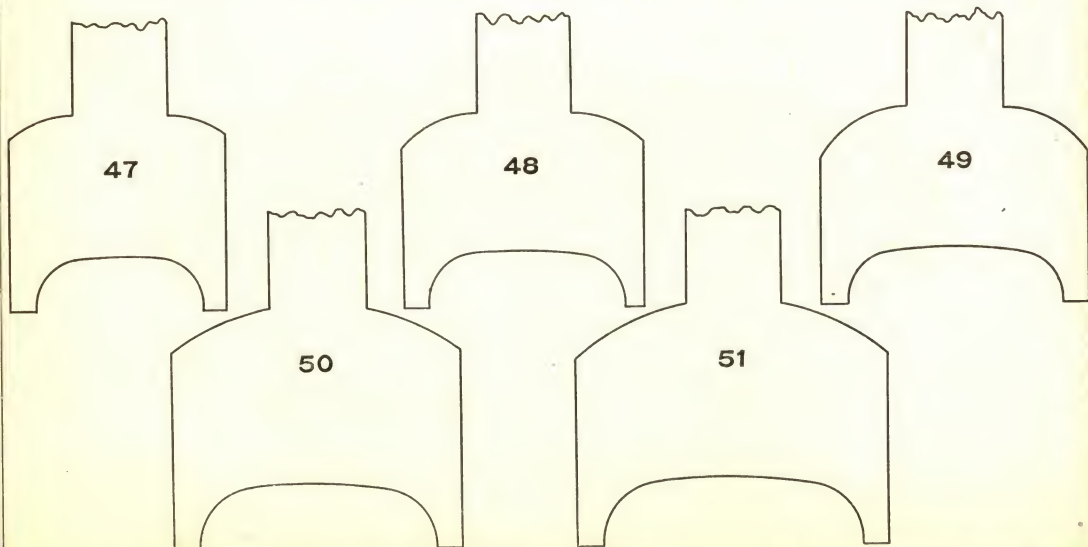
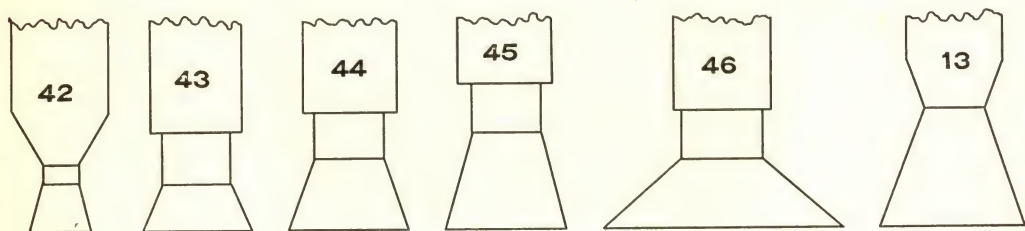
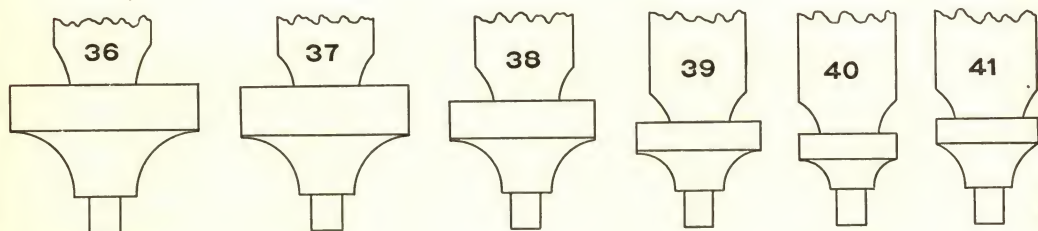
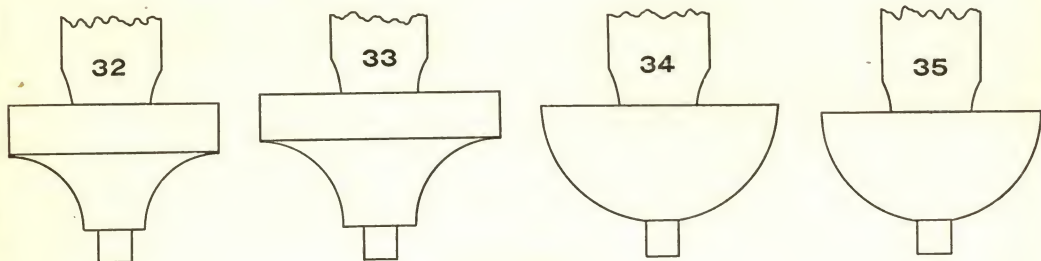
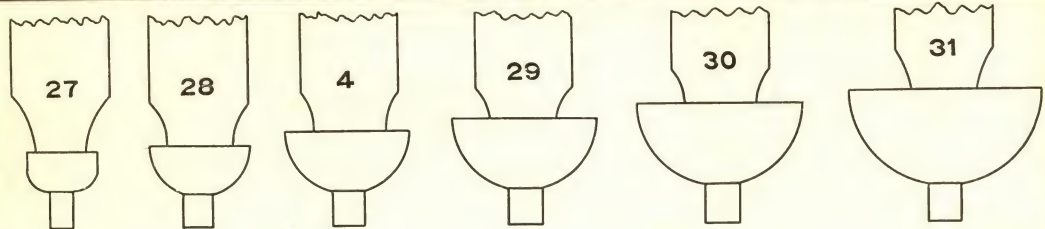
Patterns of Stair Rail



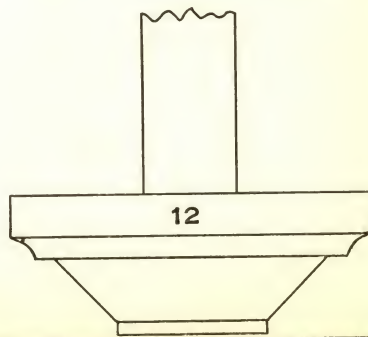
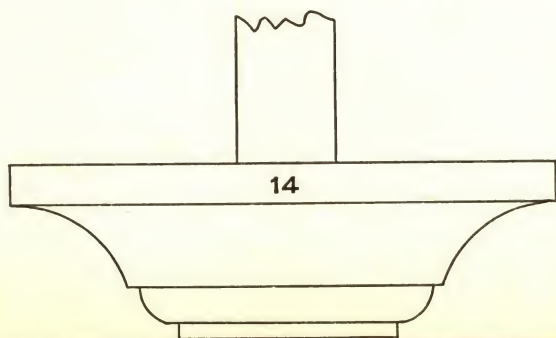
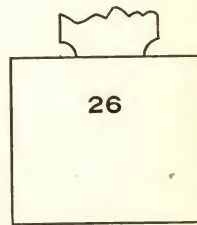
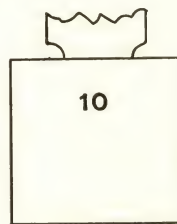
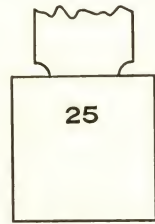
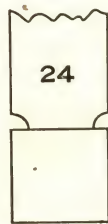
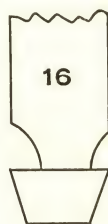
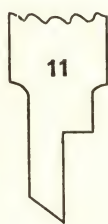
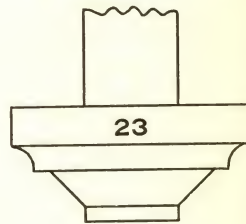
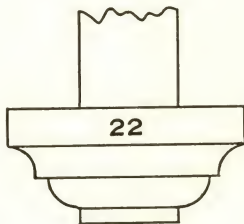
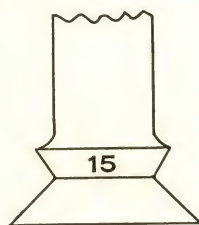
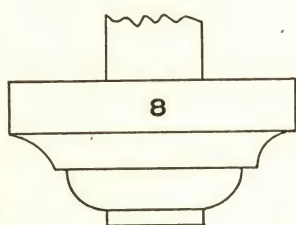
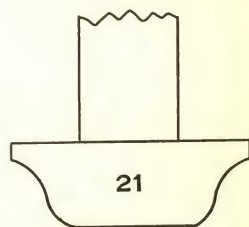
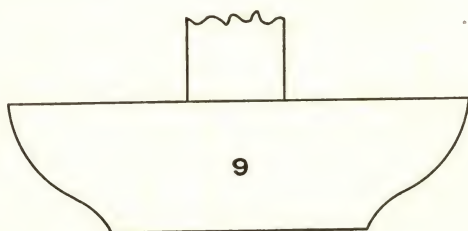
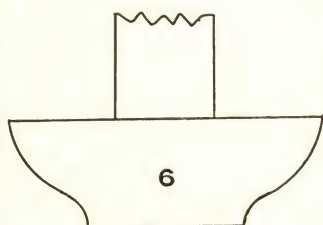
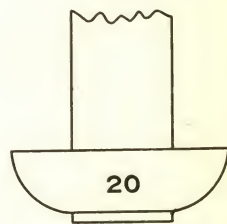
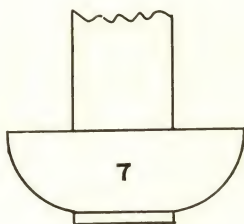
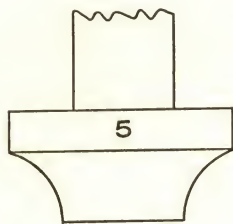
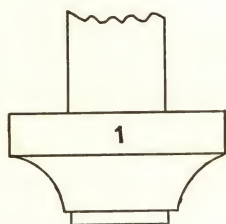
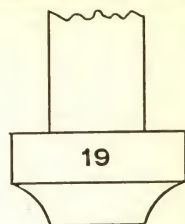
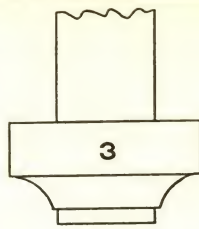
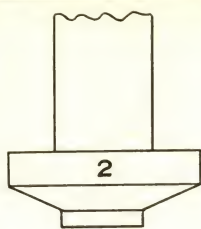
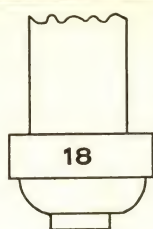
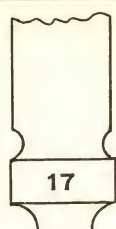
Patterns of Stair Rail



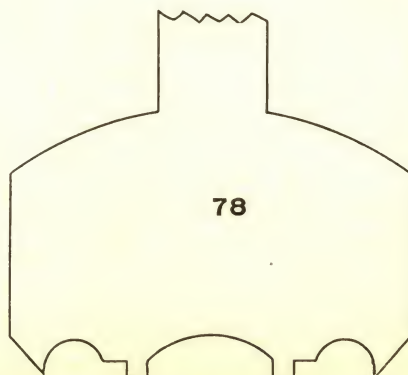
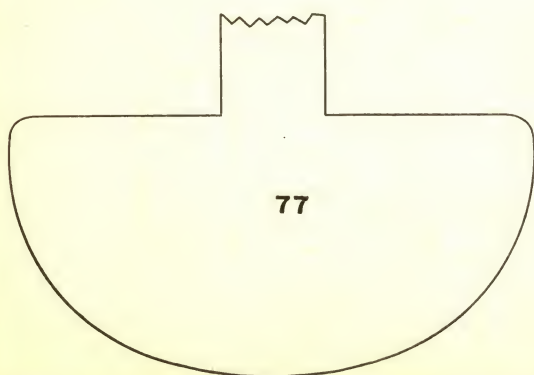
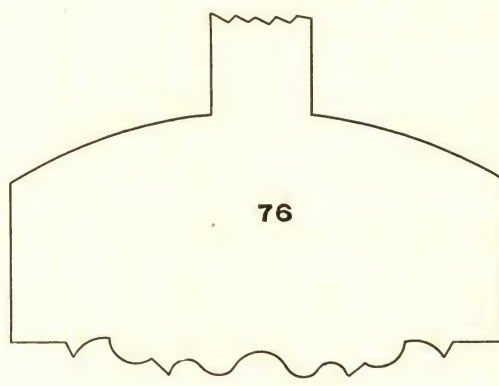
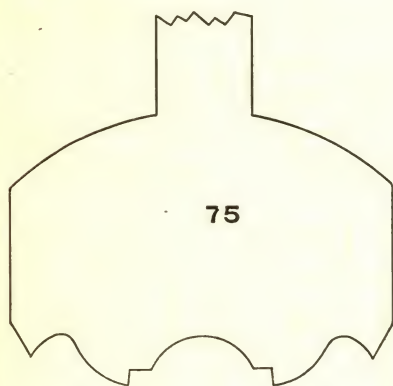
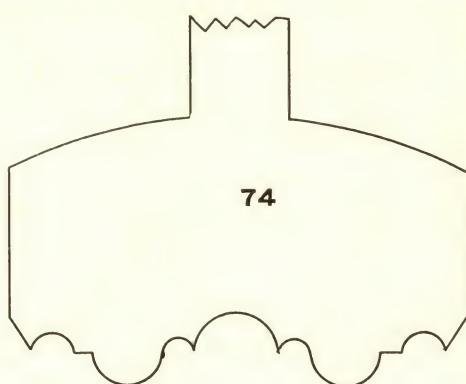
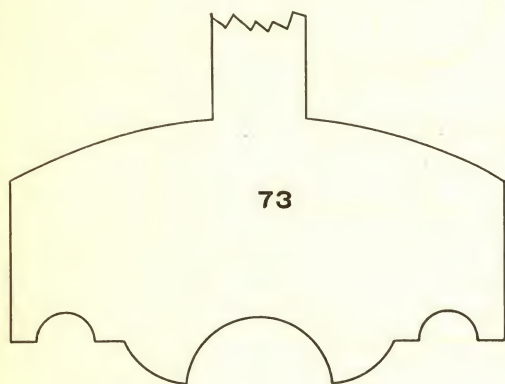
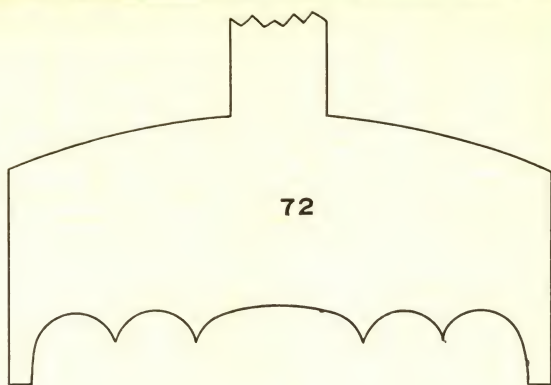
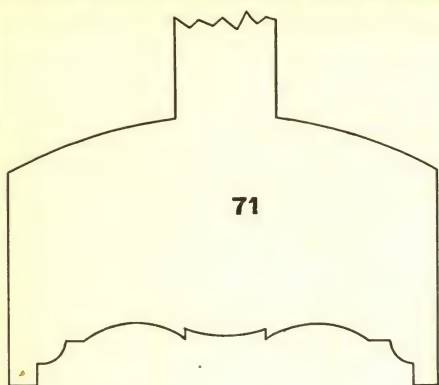
Edge & Bracket Moulding, Dovetail & Rosette Cutters.



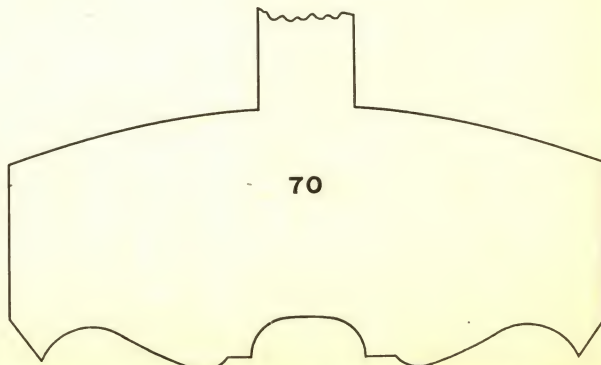
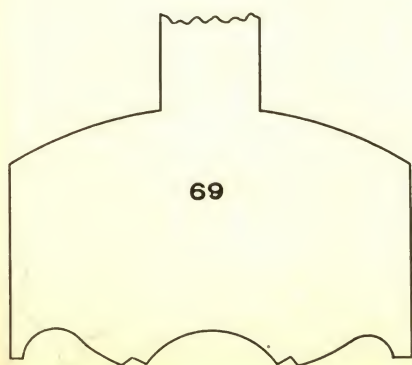
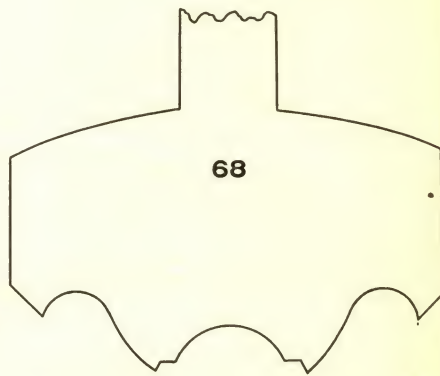
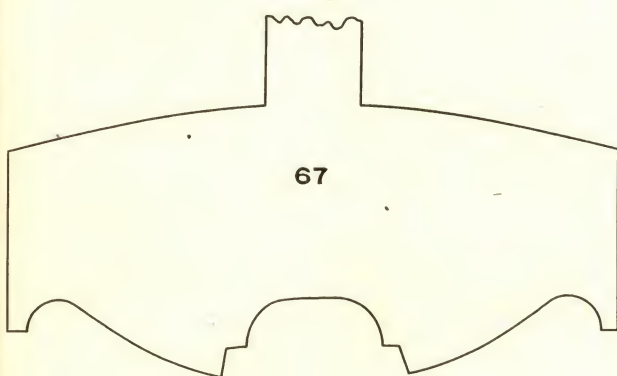
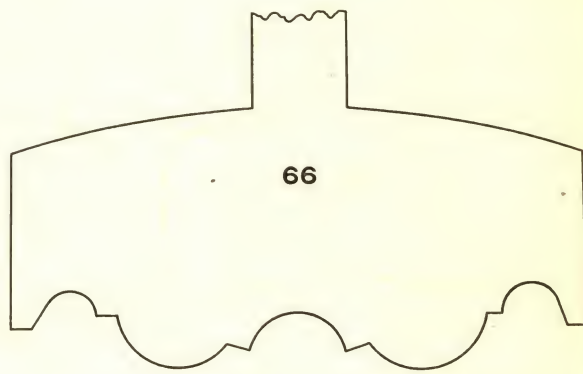
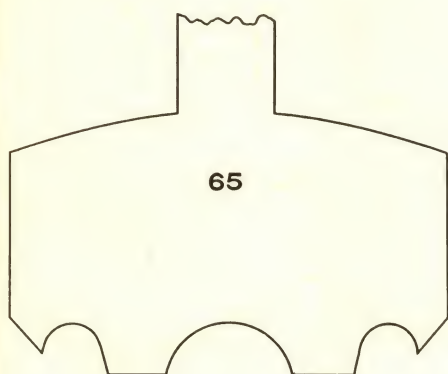
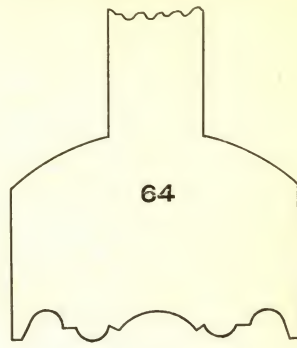
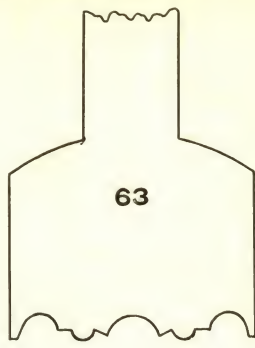
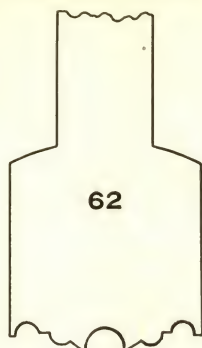
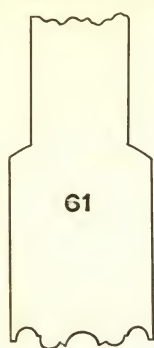
Surface Moulding Cutters



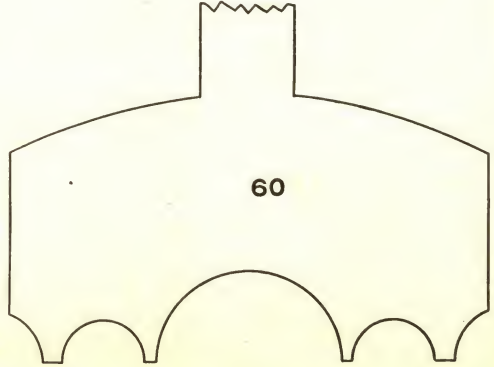
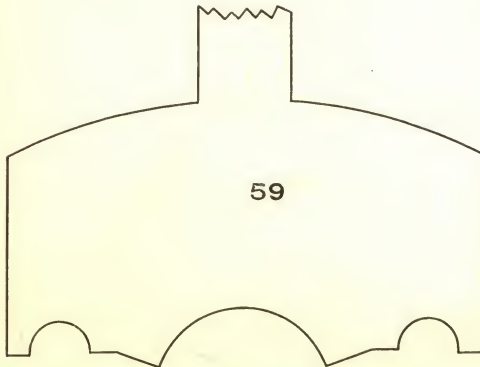
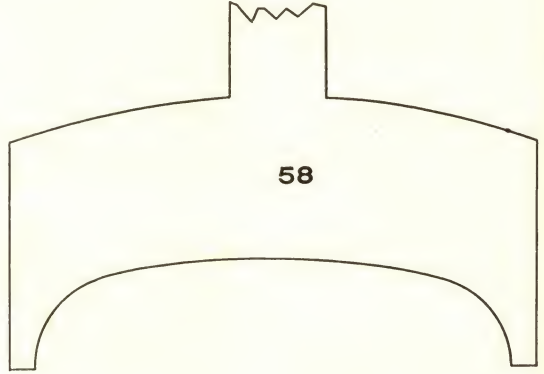
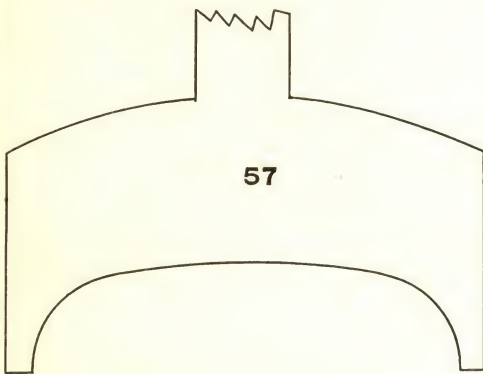
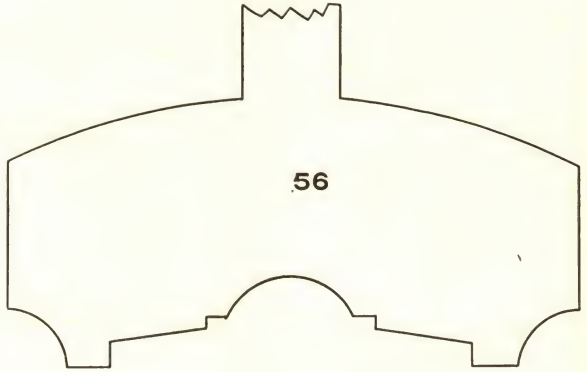
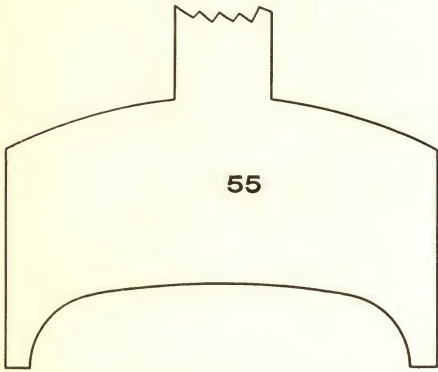
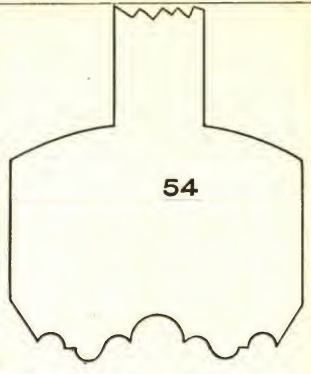
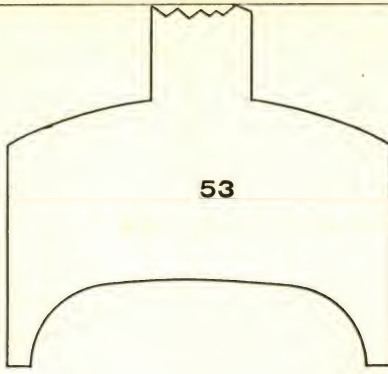
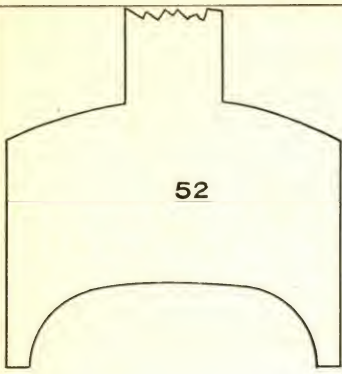
Rosette Cutters



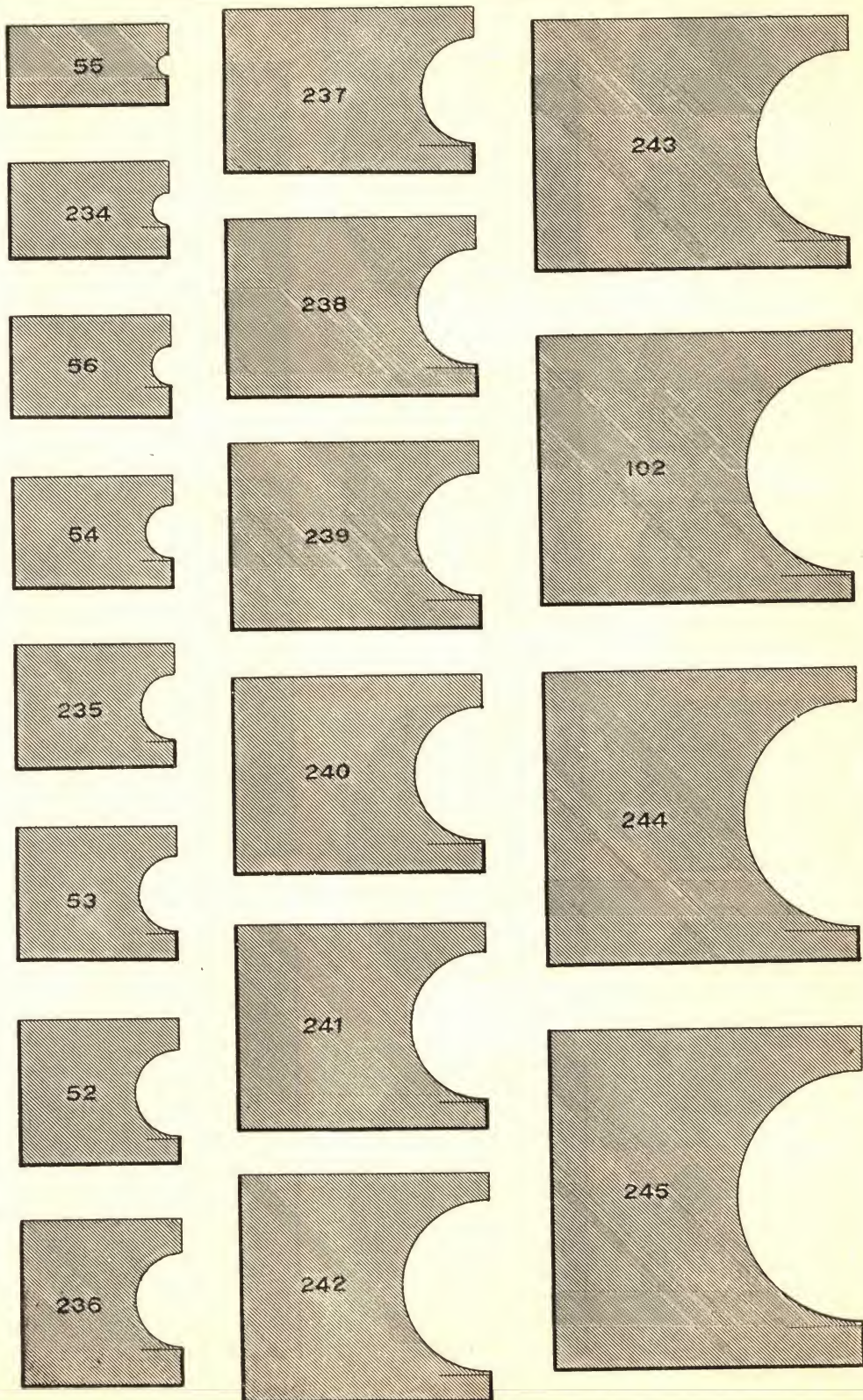
Rosette Cutters.



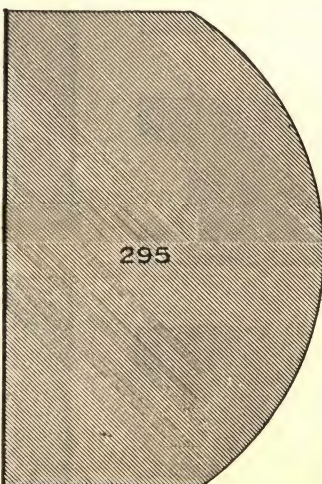
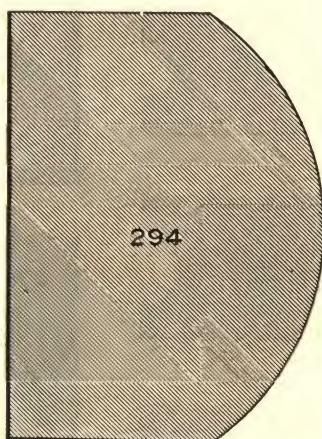
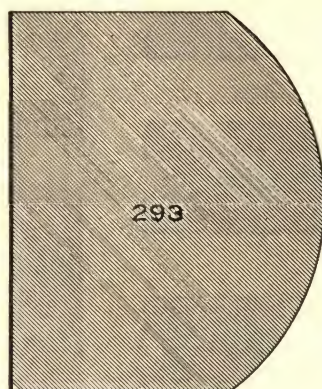
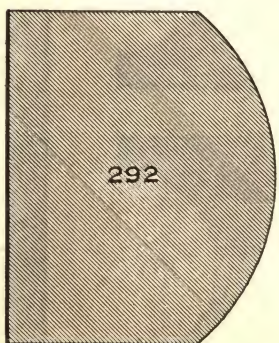
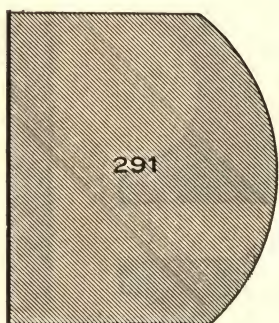
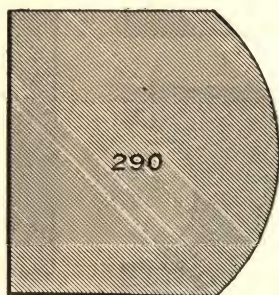
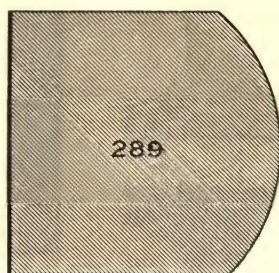
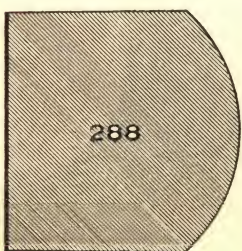
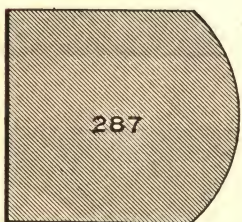
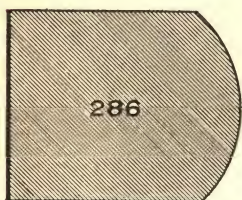
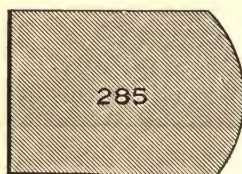
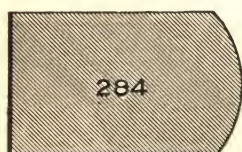
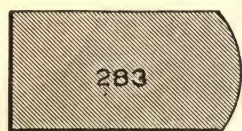
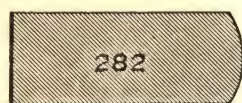
Rosette Cutters



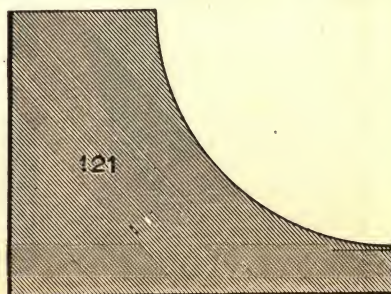
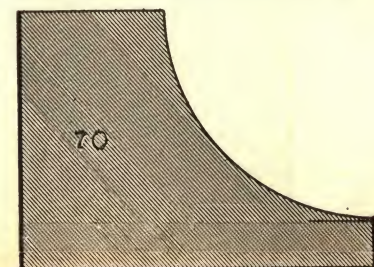
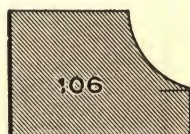
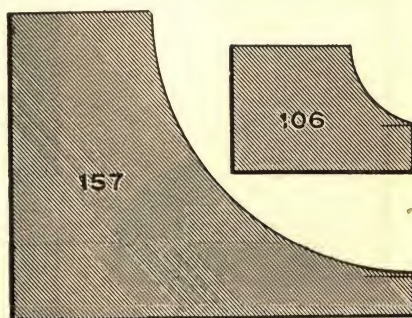
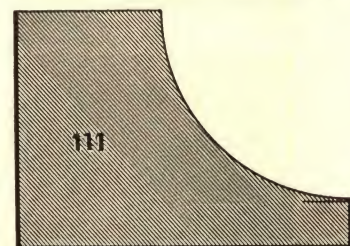
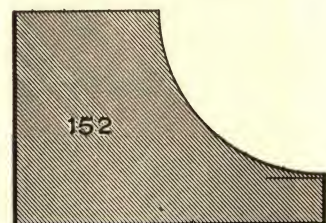
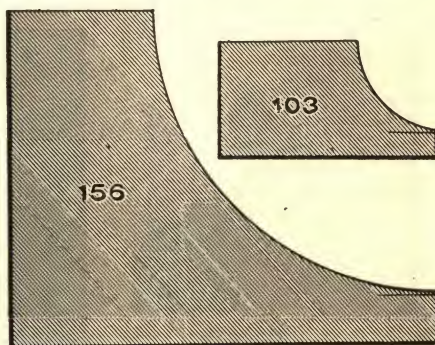
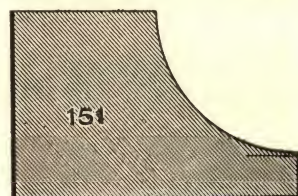
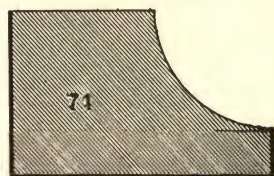
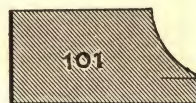
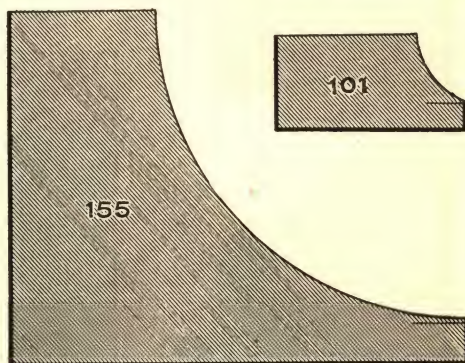
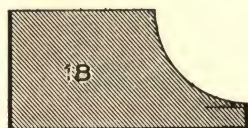
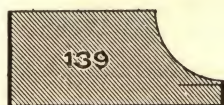
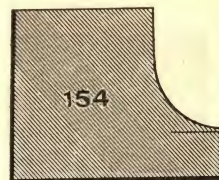
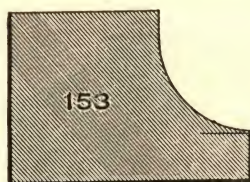
Patterns for Edge Moulding Cutters



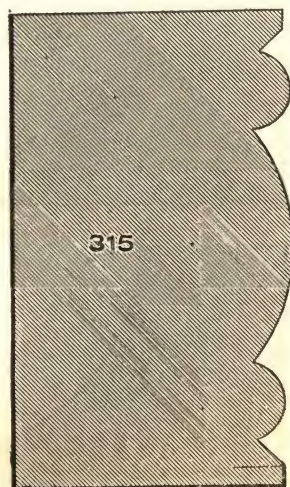
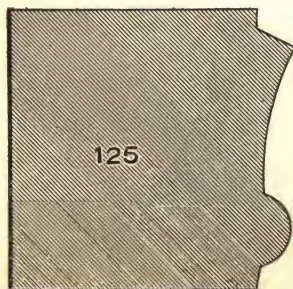
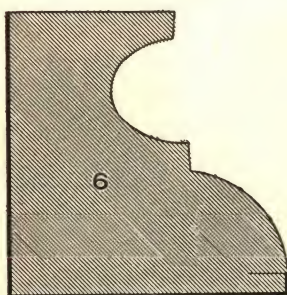
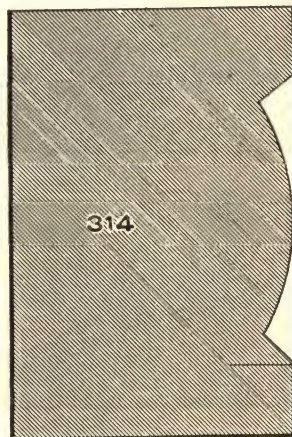
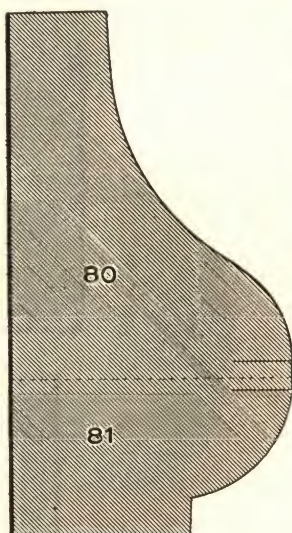
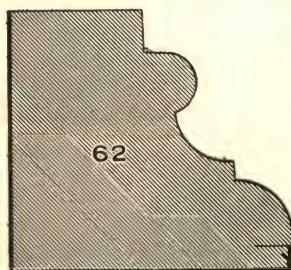
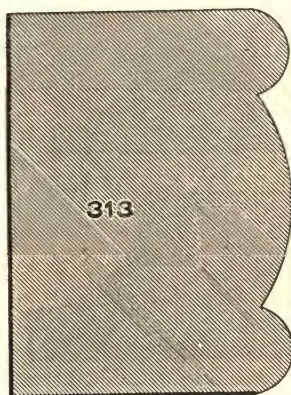
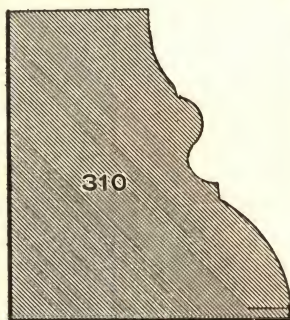
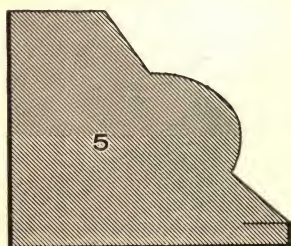
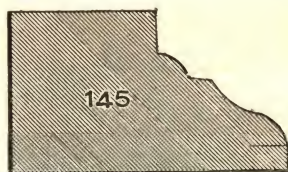
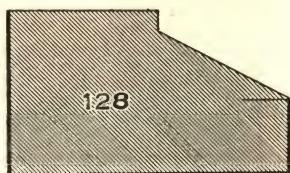
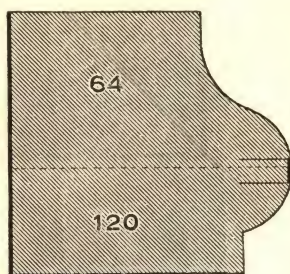
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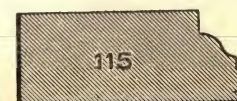
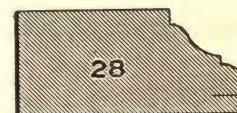
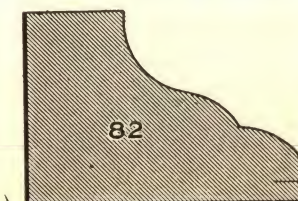
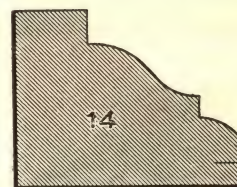
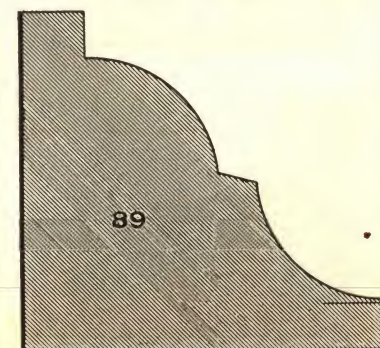
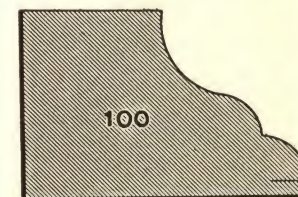
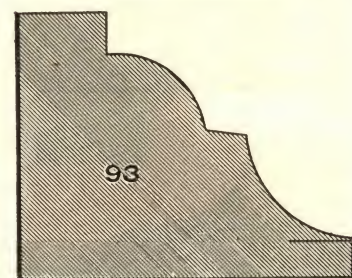
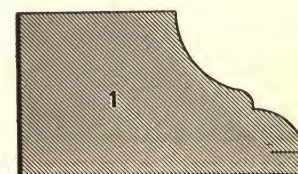
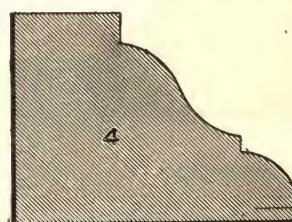
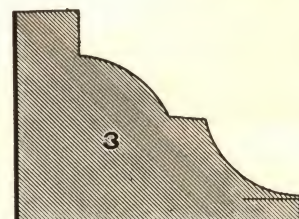
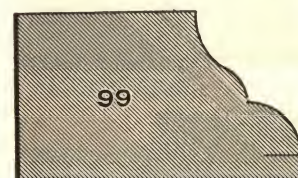
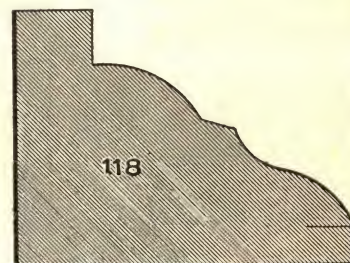
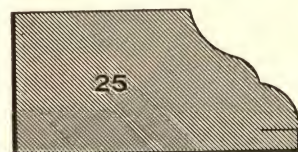
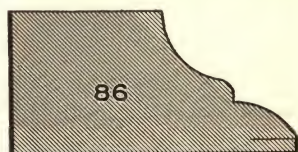
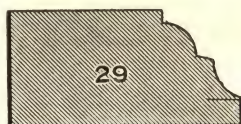
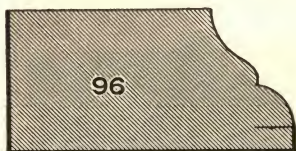
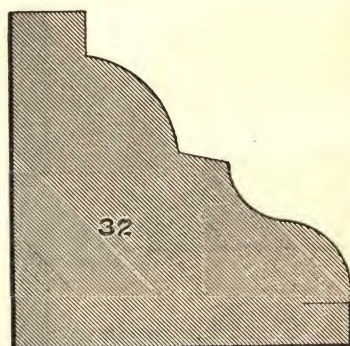
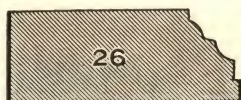
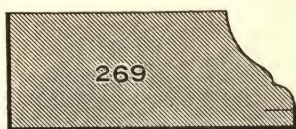
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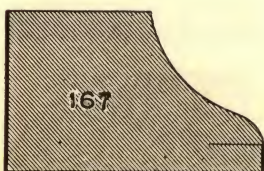
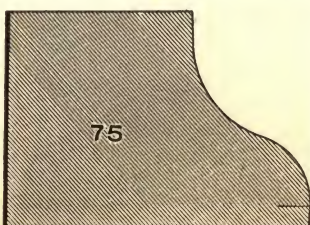
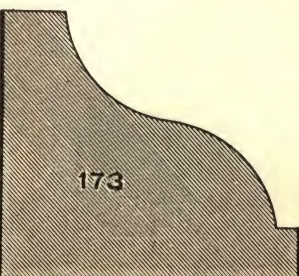
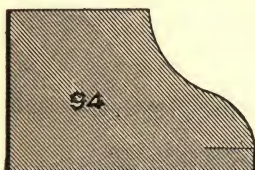
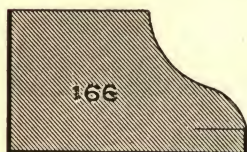
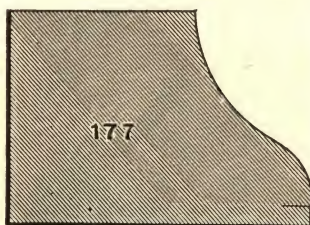
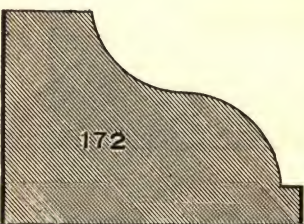
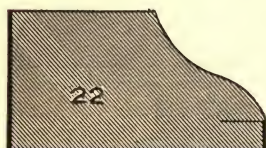
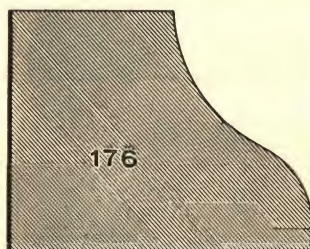
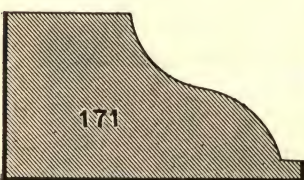
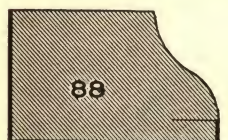
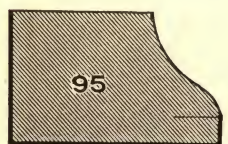
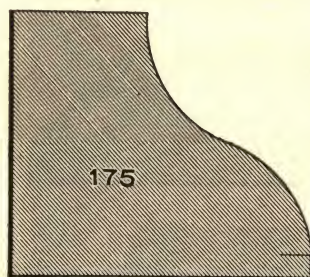
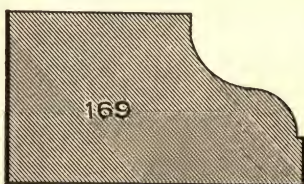
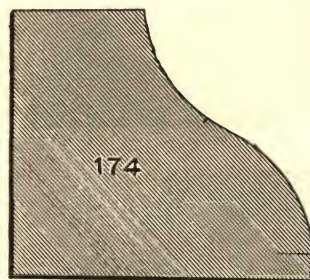
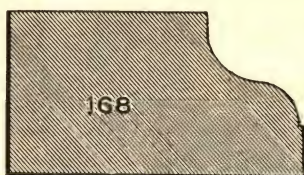
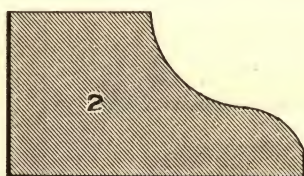
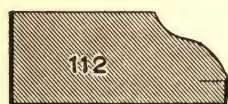
Patterns for Edge Moulding Cutters



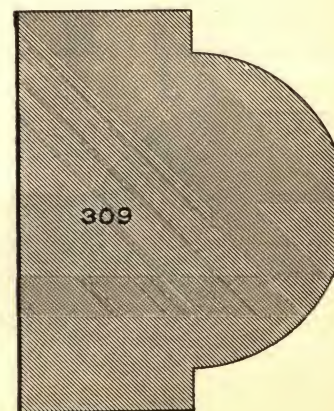
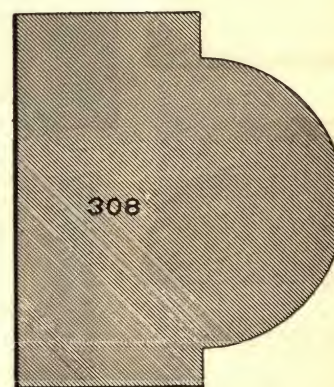
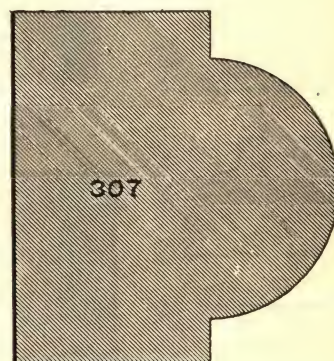
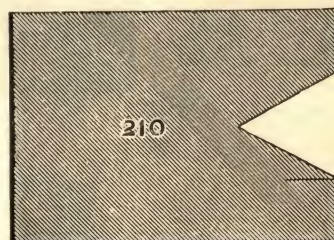
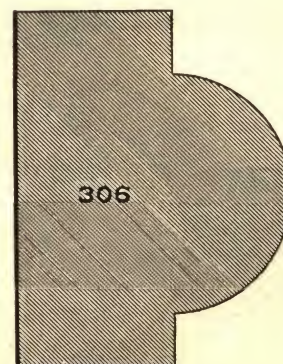
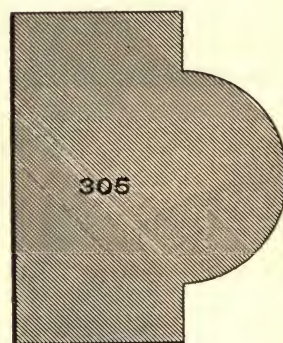
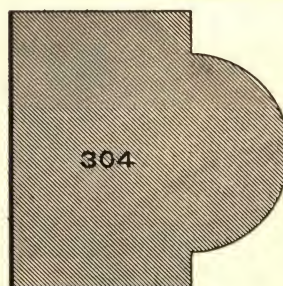
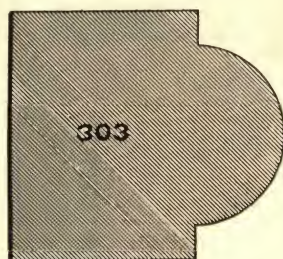
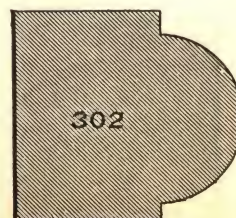
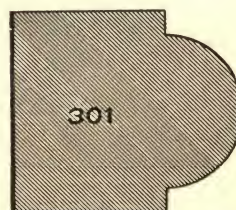
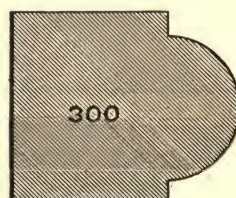
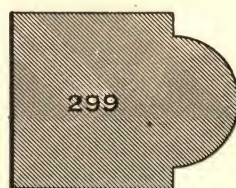
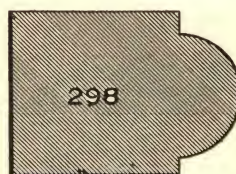
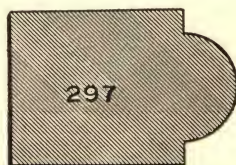
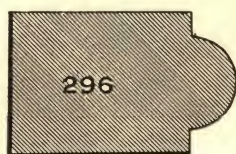
Patterns for Edge Moulding Cutters



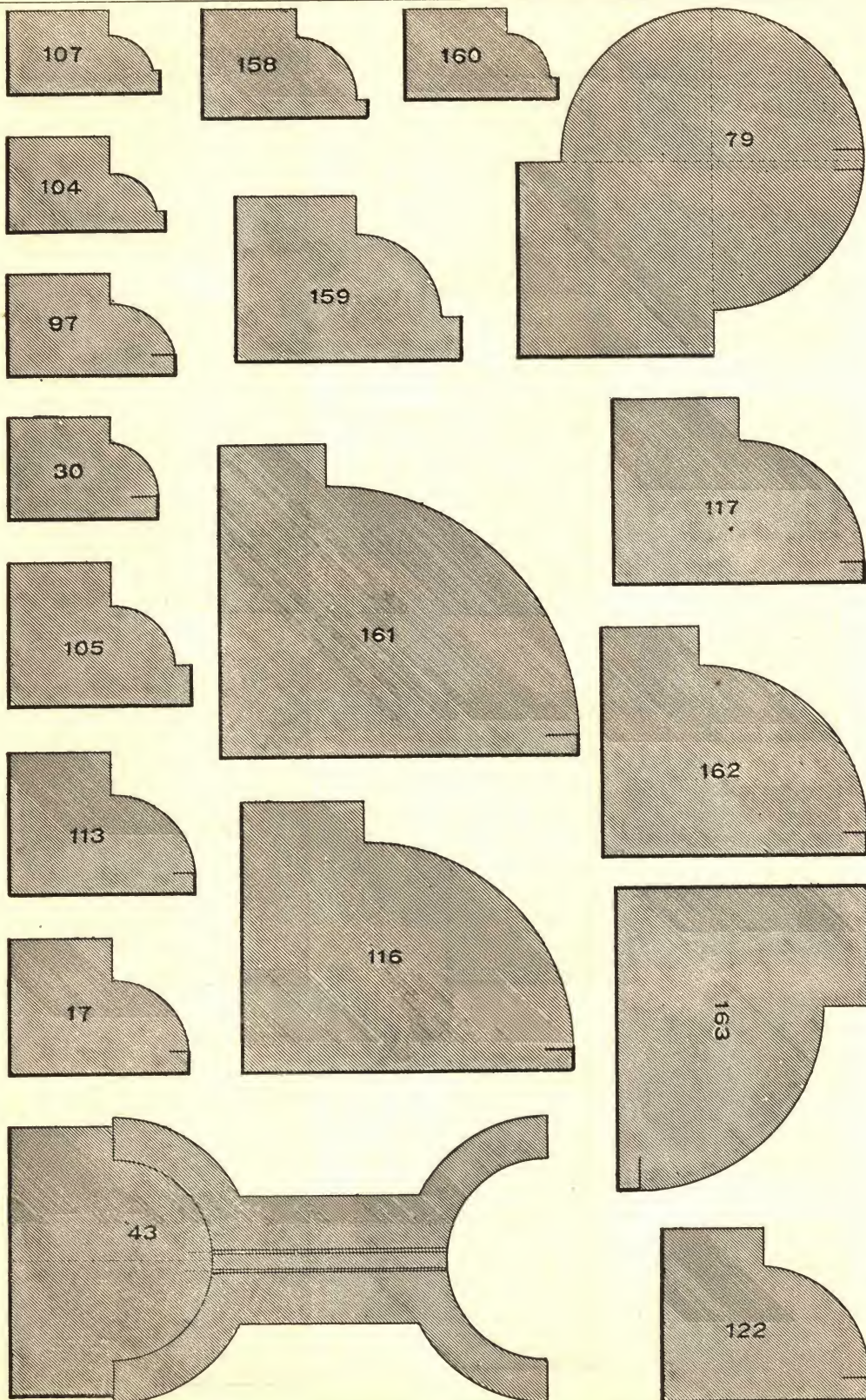
Patterns for Edge Moulding Cutters



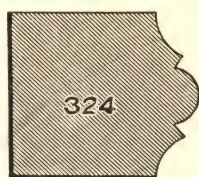
Patterns for Edge Moulding Cutters



Patterns for Edge Moulding Cutters



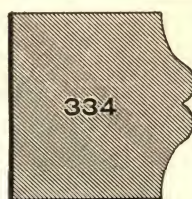
Patterns for Edge Moulding Cutters



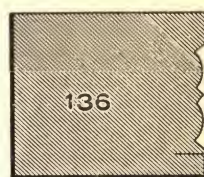
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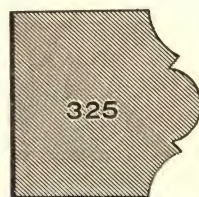
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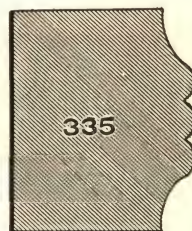
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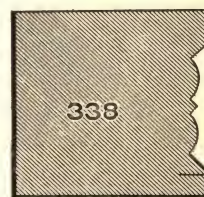
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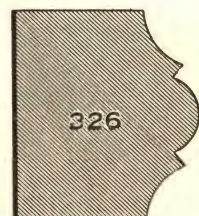
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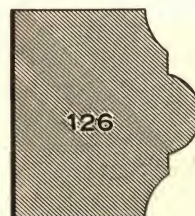
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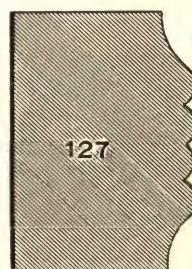
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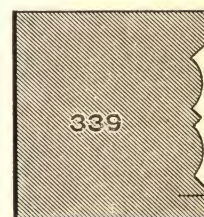
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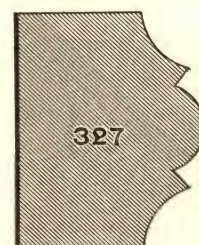
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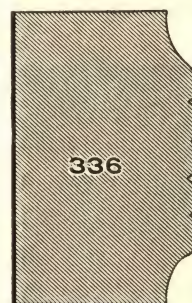
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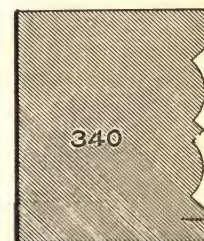
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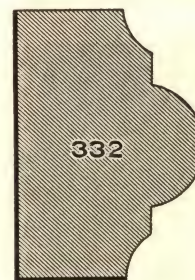
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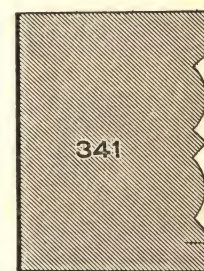
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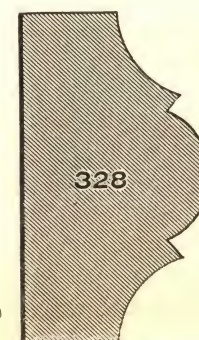
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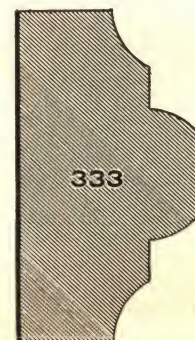
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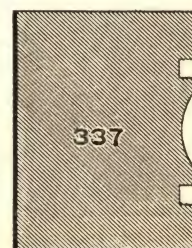
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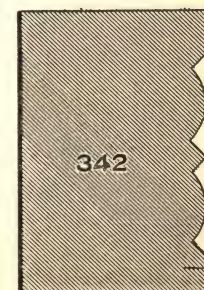
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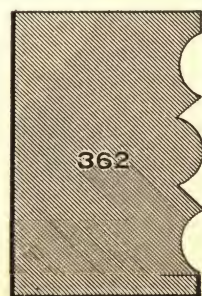
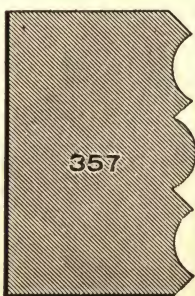
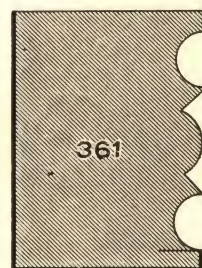
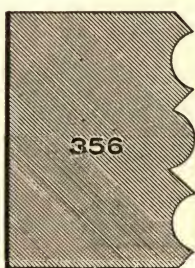
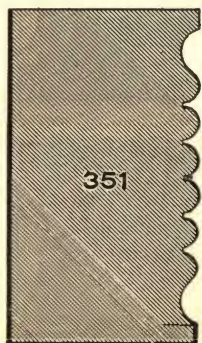
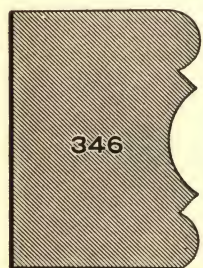
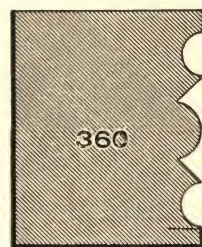
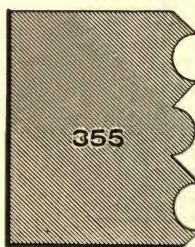
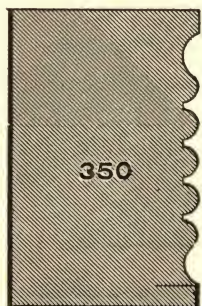
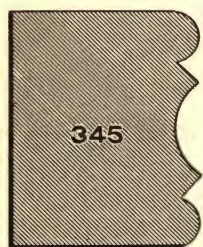
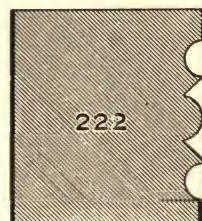
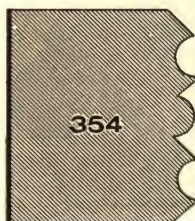
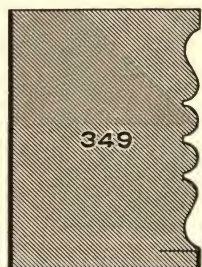
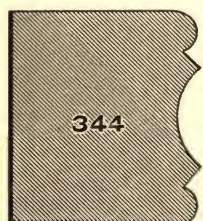
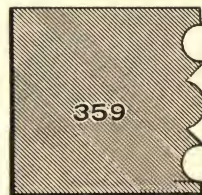
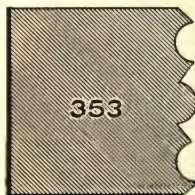
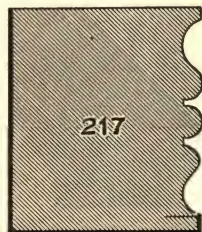
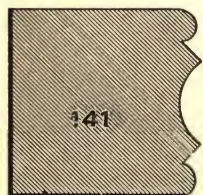
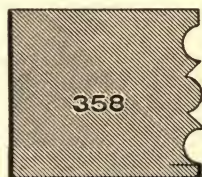
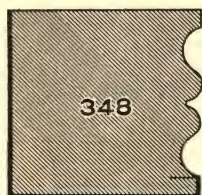
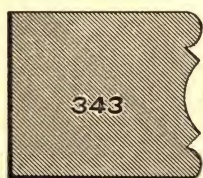


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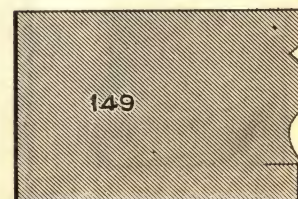
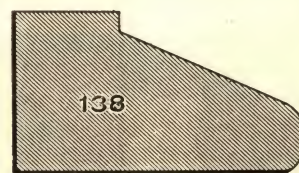
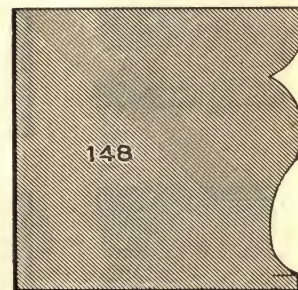
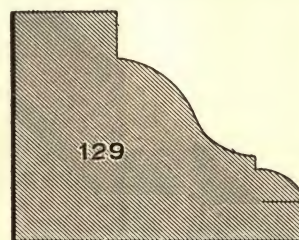
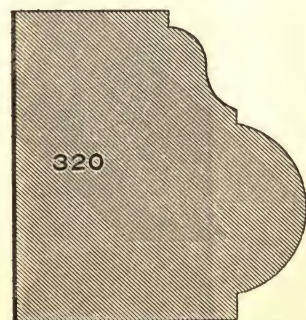
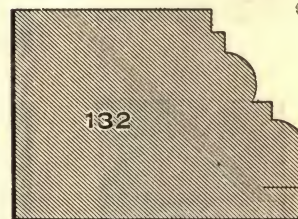
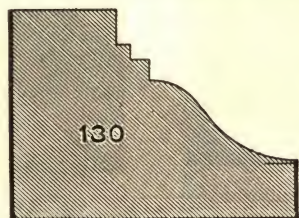
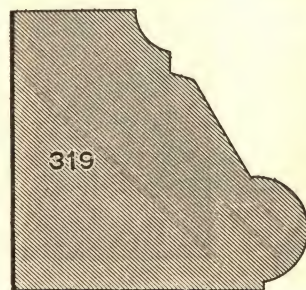
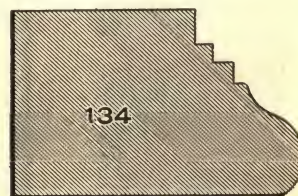
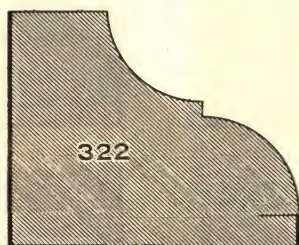
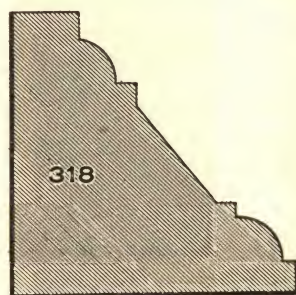
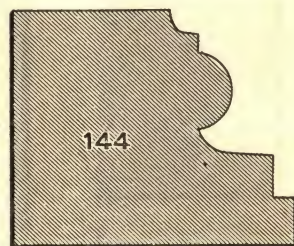
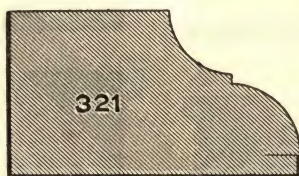
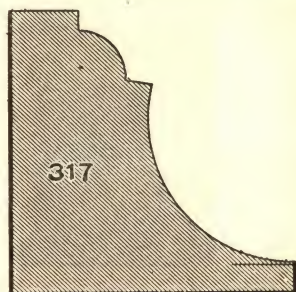
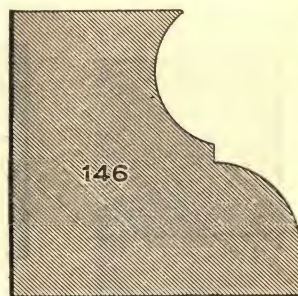
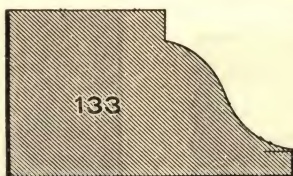
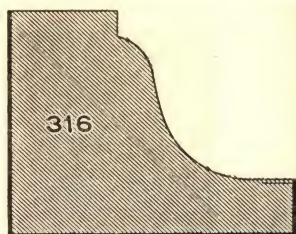


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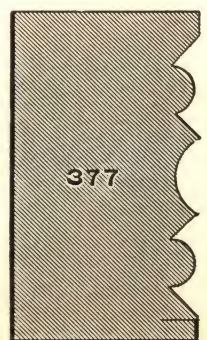
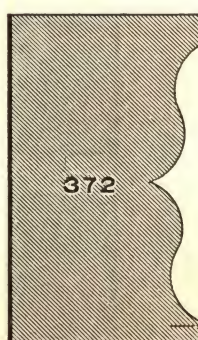
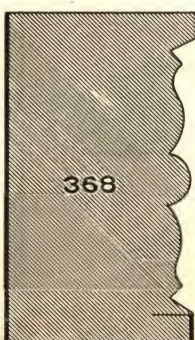
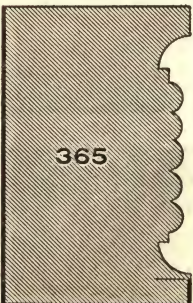
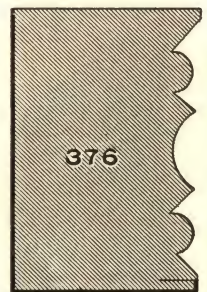
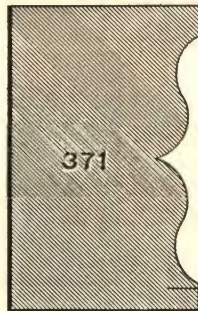
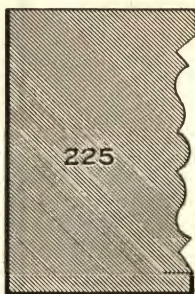
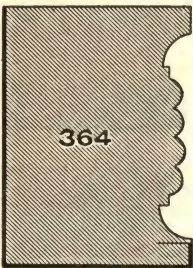
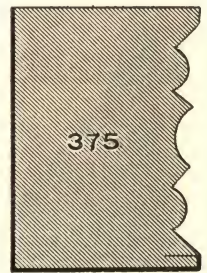
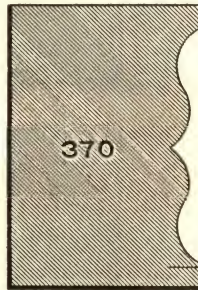
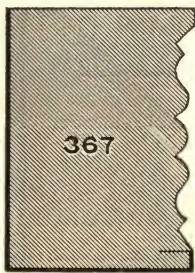
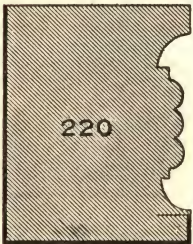
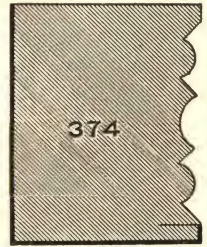
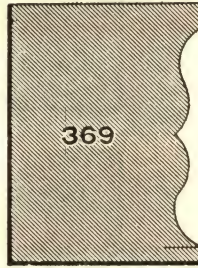
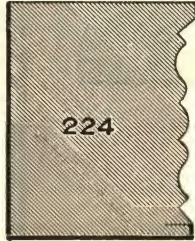
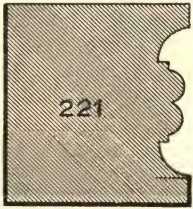
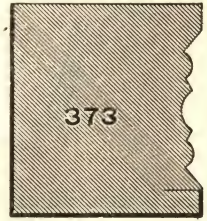
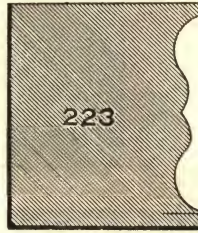
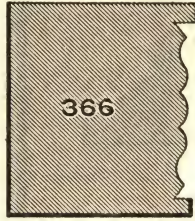
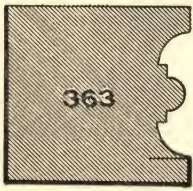
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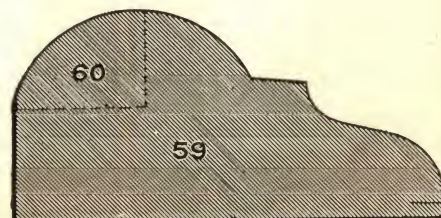
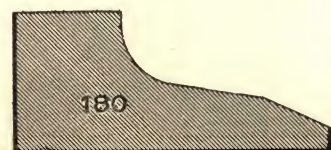
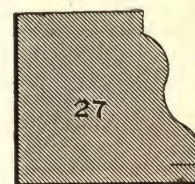
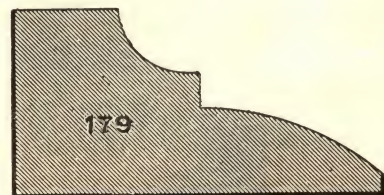
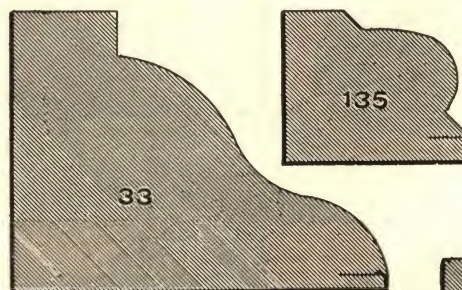
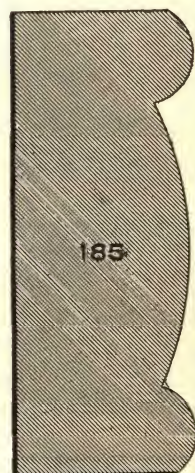
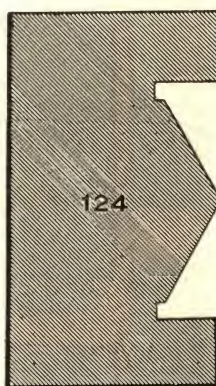
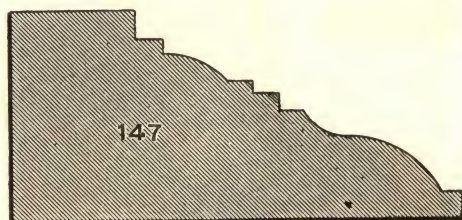
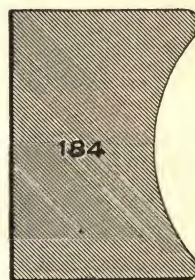
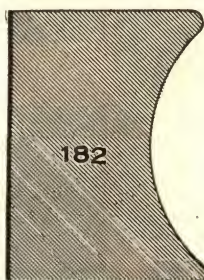
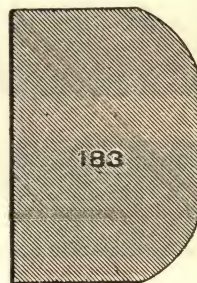
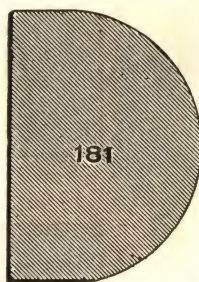
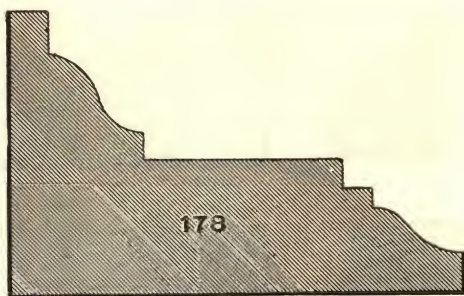
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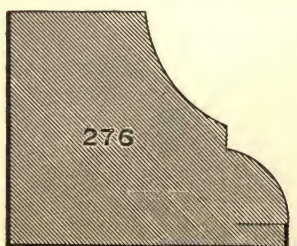
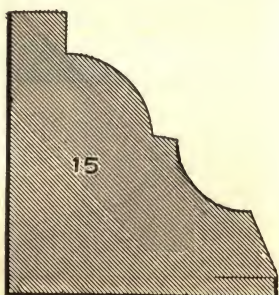
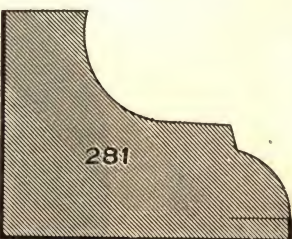
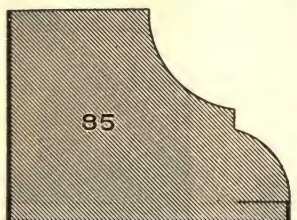
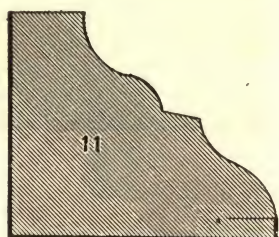
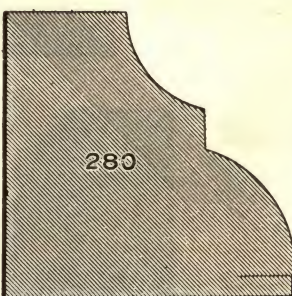
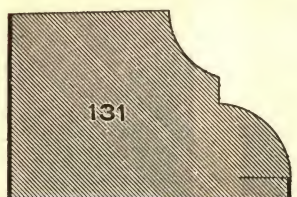
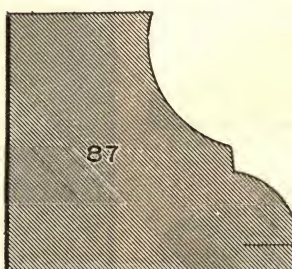
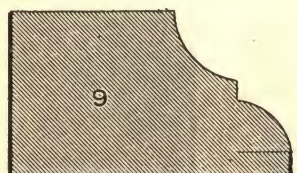
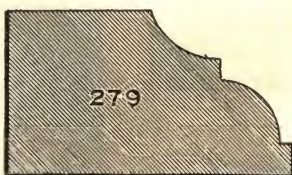
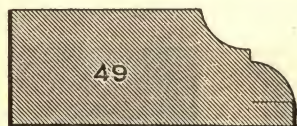
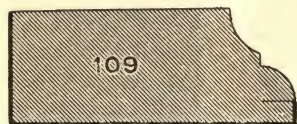
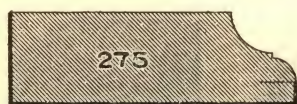
Patterns for Edge Moulding Cutters



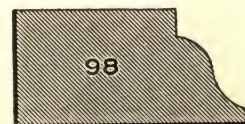
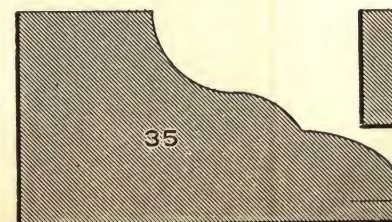
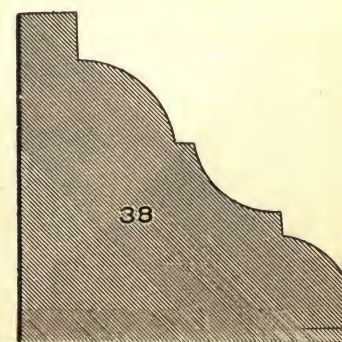
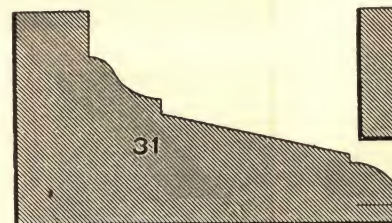
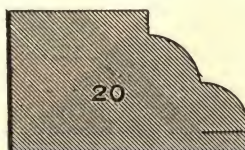
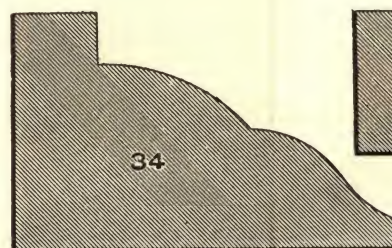
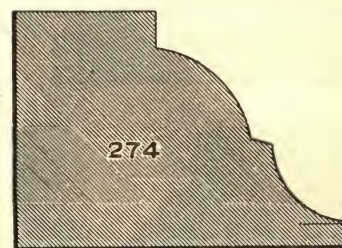
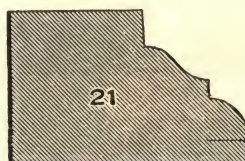
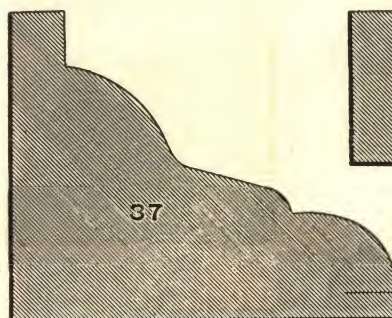
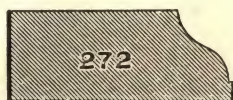
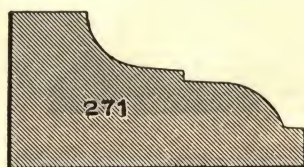
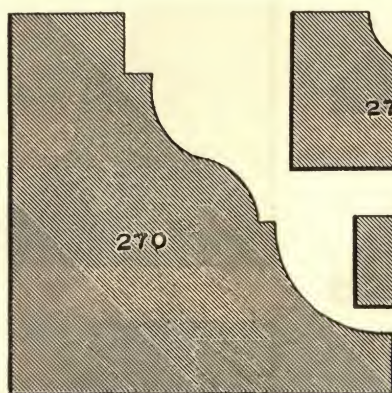
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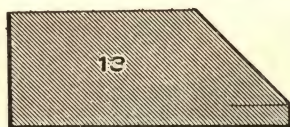
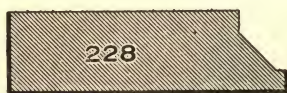
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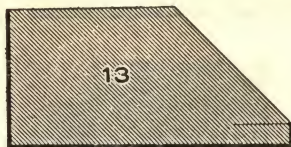
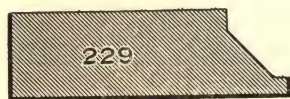
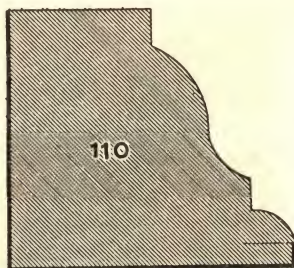
Patterns for Edge Moulding Cutters.



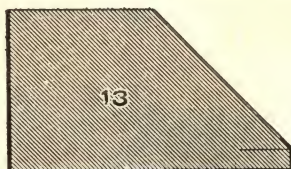
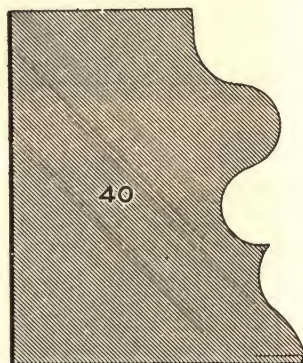
Patterns for Edge Moulding Cutters.



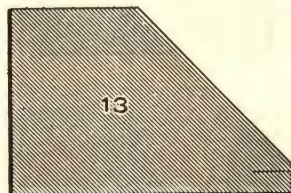
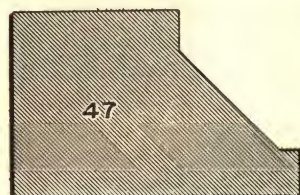
$\frac{3}{4}$ " FACE



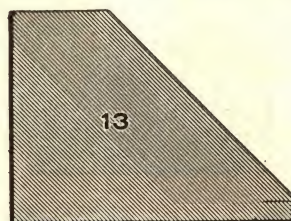
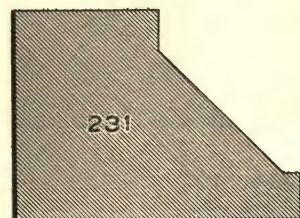
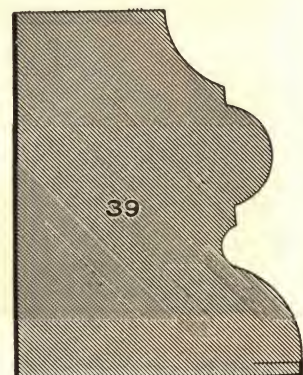
$\frac{7}{8}$ " FACE



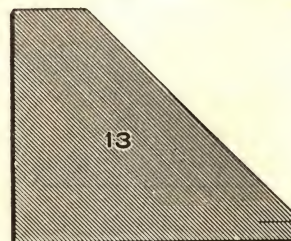
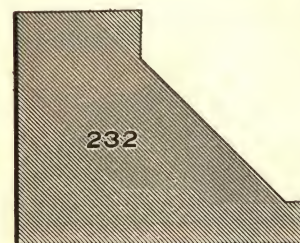
1" FACE



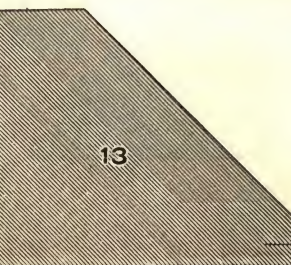
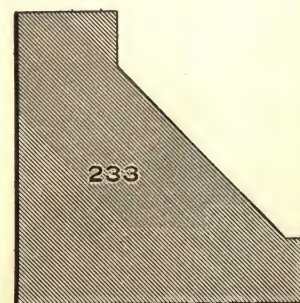
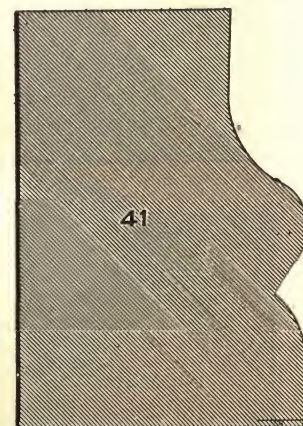
$1\frac{1}{4}$ " FACE



$1\frac{3}{8}$ " FACE

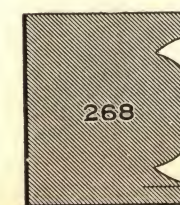
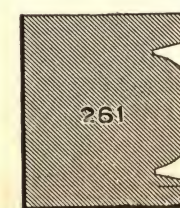
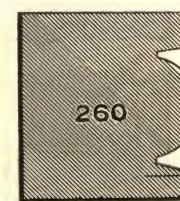
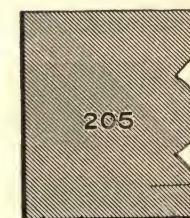
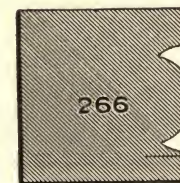
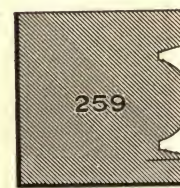
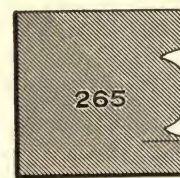
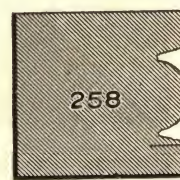
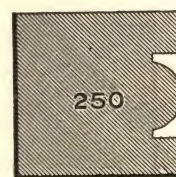
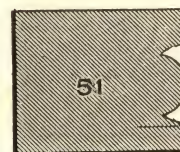
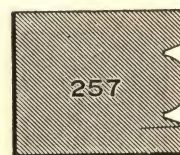
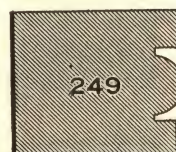
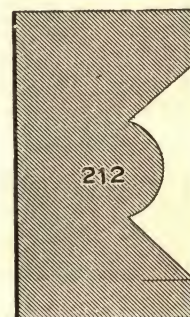
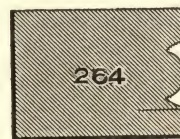
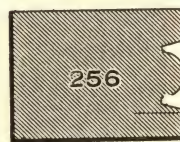
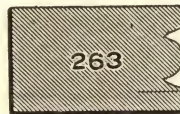
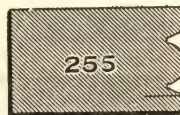
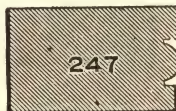
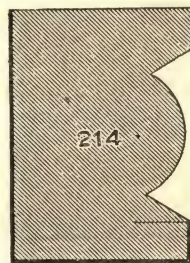
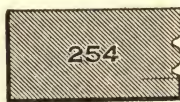


$1\frac{5}{8}$ " FACE

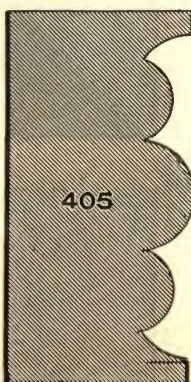
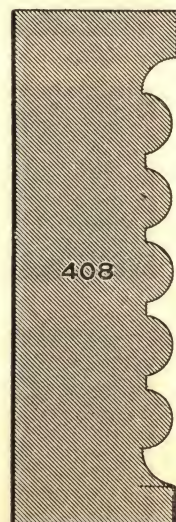
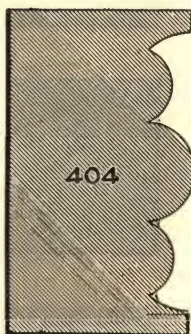
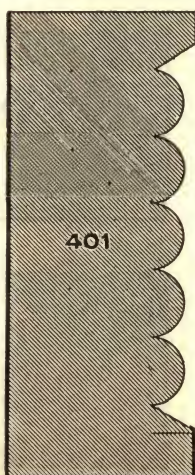
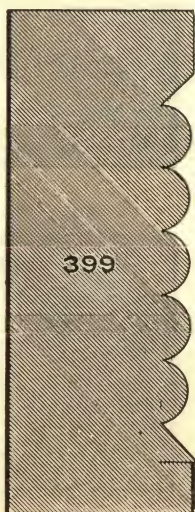
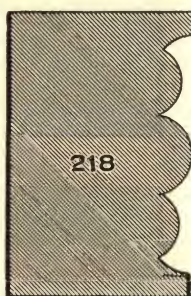
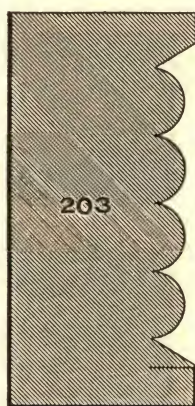
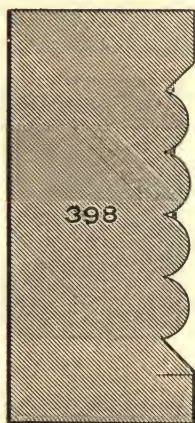
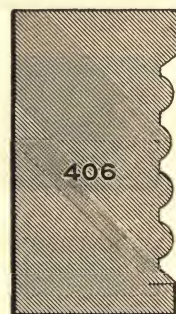
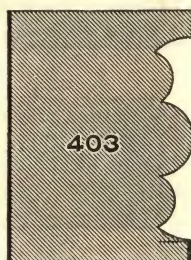
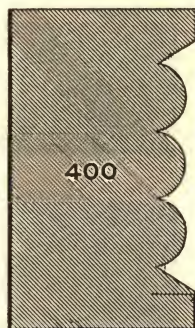
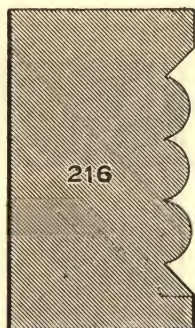
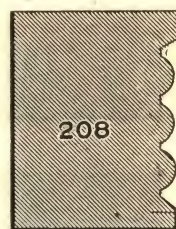
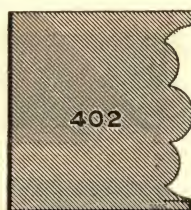
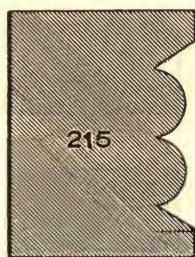
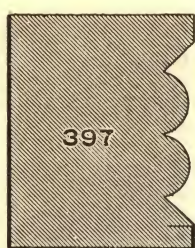


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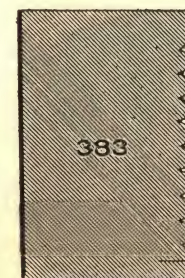
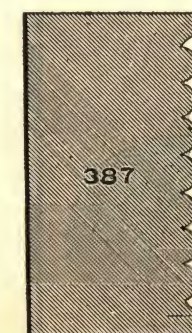
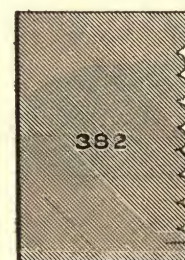
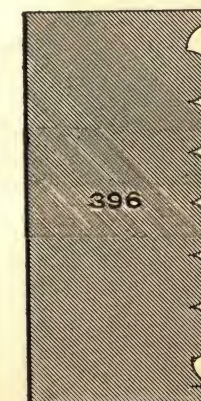
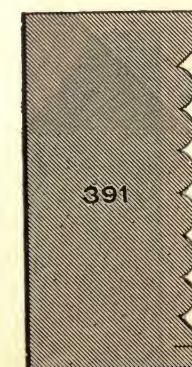
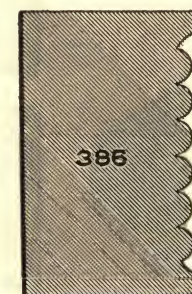
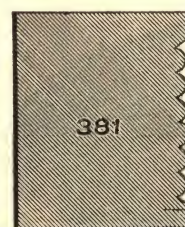
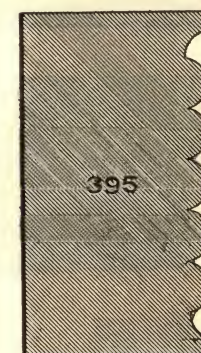
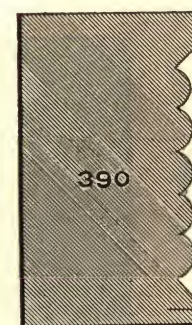
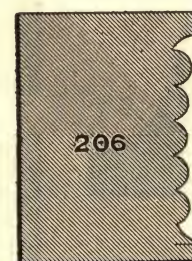
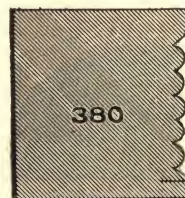
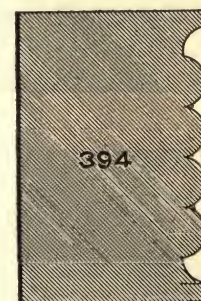
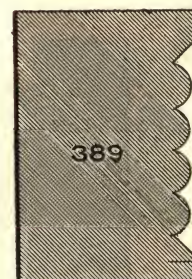
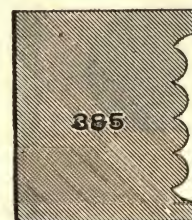
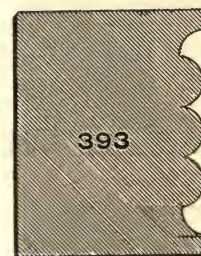
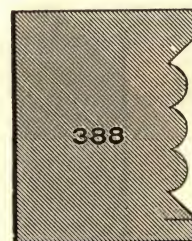
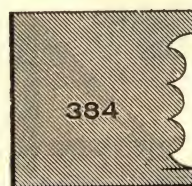
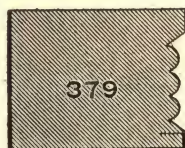
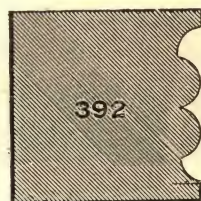
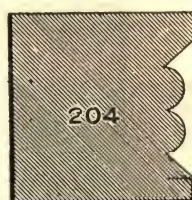
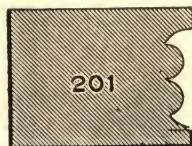
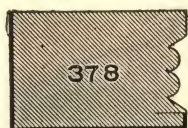
Patterns for Edge Moulding Cutters.



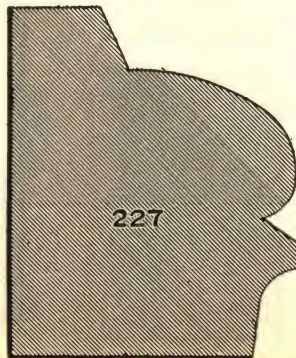
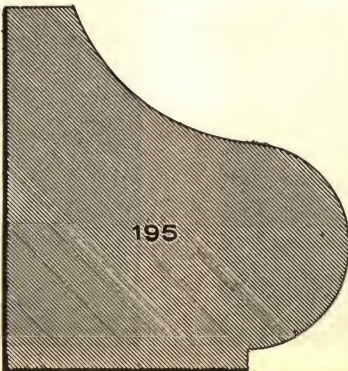
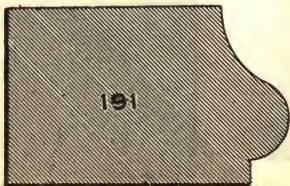
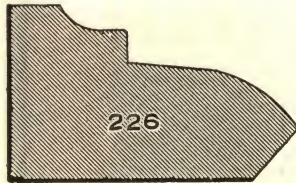
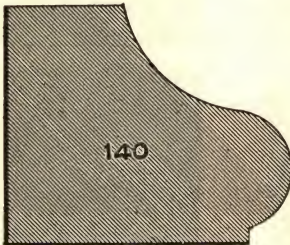
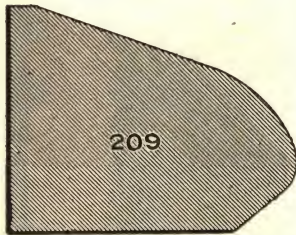
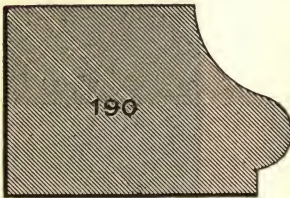
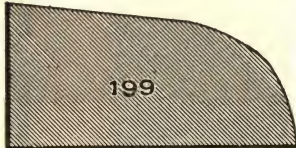
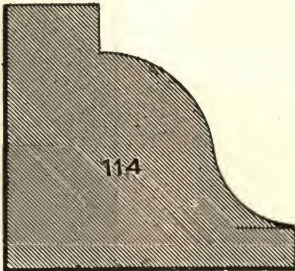
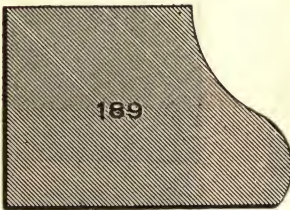
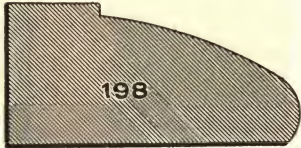
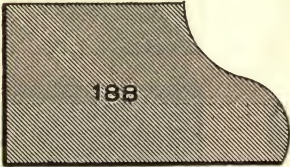
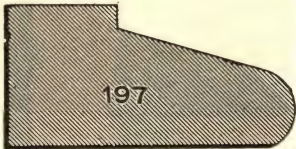
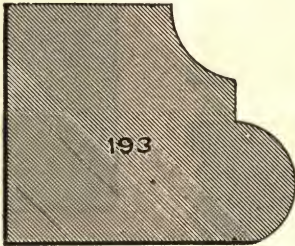
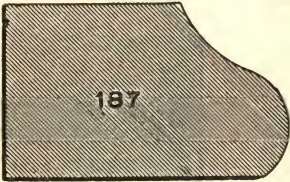
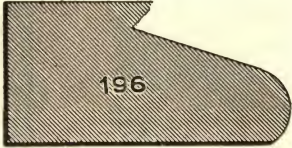
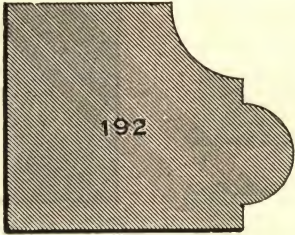
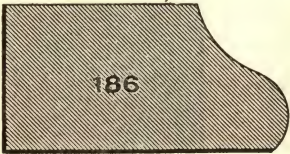
Patterns for Edge Moulding Cutters.



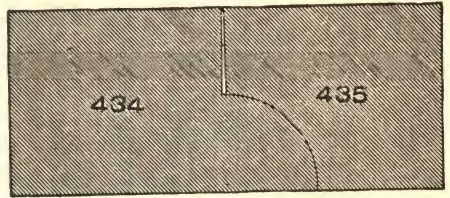
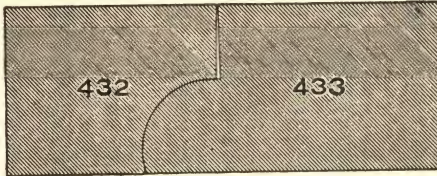
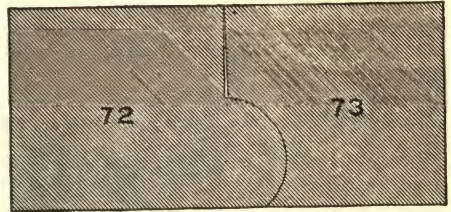
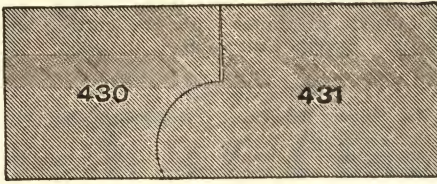
Patterns for Edge Moulding Cutters.



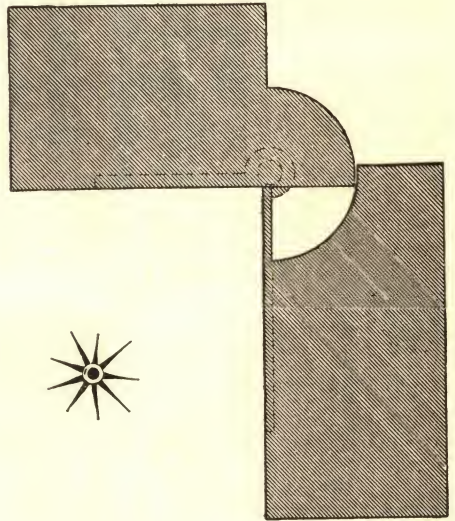
Patterns for Edge Moulding Cutters.



DROP LEAF TABLE JOINT.



*There are
many
peculiarities
in making
Cutters
for working
Table Joints.*



Every practical table maker will have ideas of his own ; first, with reference to the shape ; next, with reference to the manner of hinging them. We show only such patterns here as we know to be shaped correctly by experience, having spent much time in perfecting them. We also represent how the hinge is applied.

**We make Cutters to suit any special pattern,
And to please the fancy of the most particular workman.**

For those working constantly on this class of work and wanting tools more permanent and lasting than our Solid Shaper Cutters, we make Shimer Circular Bit Heads complete, as shown on page 58.

Variety Moulders.



The Variety Moulders No. 4 and No. 5, represented on the following pages, have been on the market since 1878, since which time more than 1,200 machines (including the No. 6) have been sold. They have recently been improved, and are now made upon the interchangeable plan in greater numbers than ever. We have a department devoted exclusively to their manufacture, in charge of competent and thorough mechanics. We guarantee workmanship and material to be of the best. Making this machine a specialty, and upon interchangeable plan, we are enabled to offer prices heretofore thought impossible.

A Single Spindle Shaper should claim the attention of every manufacturer: first, because of its convenience; second, because of its compactness; third, because of safety.

The Shimer Shaper has grown in popularity and favor everywhere, and every machine sold has influenced the sale of others, directly or indirectly. Another point which signals the way for the "Shimer" is the fact that it was the first Friction Shaper in the field, and has served as the model for many imitations, all of which goes to prove its popularity and the estimate of value the users generally place upon it.

All inquiries receive our careful attention.

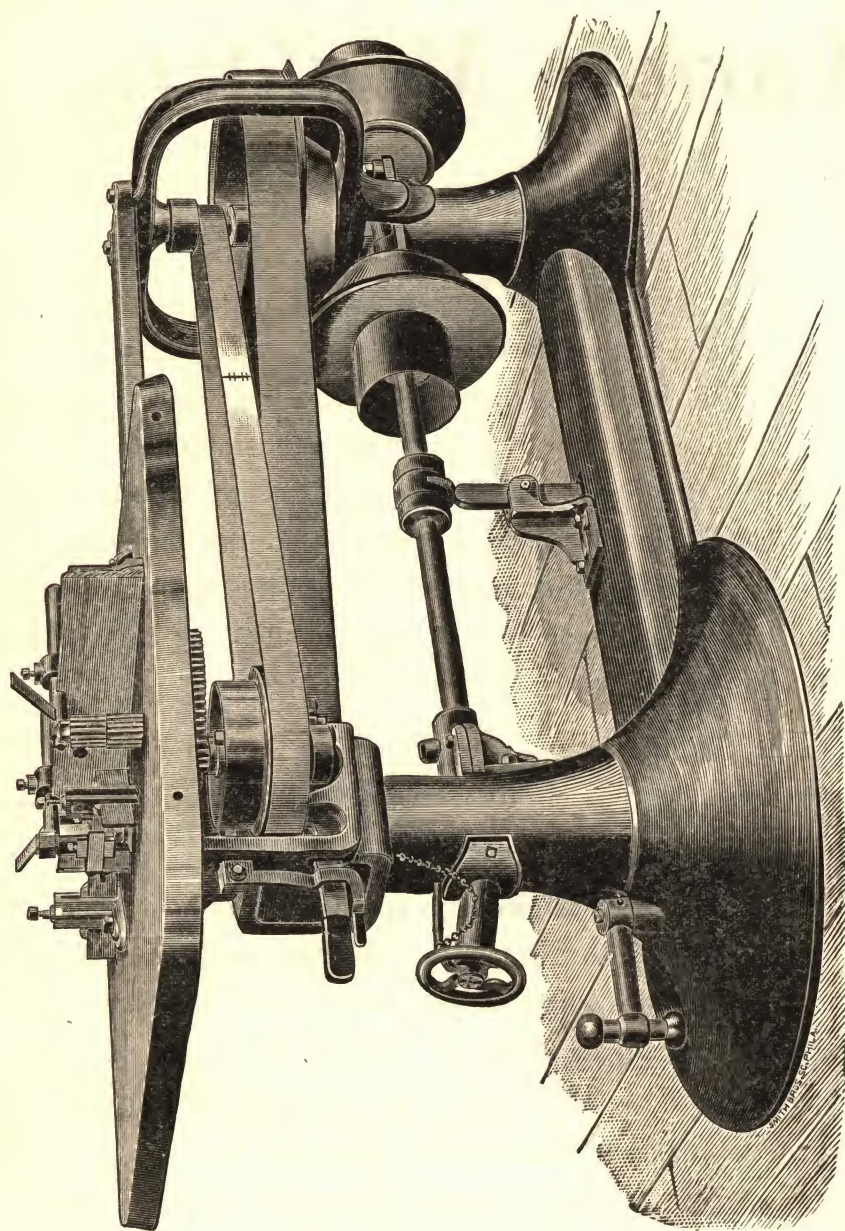


FIG. 125.

Variety Moulder, No. 3. Weight, 1600. (For description, etc., see next page.)

Variety Moulder, No. 3.



*For Builders of Heavy Wagons, Implements
and heavy work generally.*

This Machine is complete and ready for work—no separate counter-shaft, but all neatly built upon one base, combining great strength and durability. The mechanism for raising and lowering the Spindle is within the upright that supports the table, and is operated by the hand-wheel. (See Fig. 127.)

Spindle and Housing.



FIG. 126.

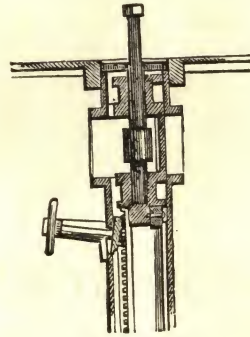


FIG. 127.

The "T" on the base of the Machine connects with an eccentric joint arranged between springs below the base plate, and works the shipping lever.

The "T" will stand at any angle, and is set to the right or left with the foot. The operator's hands are free to move his work to the Cutter, which is instantaneous in its action, and is under such command that it can be brought to full speed or a standstill in a second of time.

The Friction and Belt Pulleys are, in a manner, one, and, therefore, as light as is possible to make them.

The Counter-Shaft Bearings are placed immediately below the point of frictional contact, to secure the power at once direct and strong. The operator has full and perfect command of the Machine, *without moving out of position.*

To change Spindles, throw off the belt and run the housing, by means of the hand-wheel, to the top of table, when one part is readily changed for another part—having the size Spindle wanted. Size of Table, 3 feet by 3 feet 10 inches.

This Machine is made with a Self-Feeding Attachment, having two speeds, and will run 4-inch moulding and upwards.

The Driving Belt shown is 4 inches wide. The Driver is 22 inches in diameter; Spindle Pulley $3\frac{1}{2}$ inches diameter; Counter-Shaft $1\frac{1}{2}$ inches diameter, and should make 800 revolutions per minute. Counter Pulleys 7 inches diameter, $5\frac{1}{2}$ inch face.

Price, \$225.00

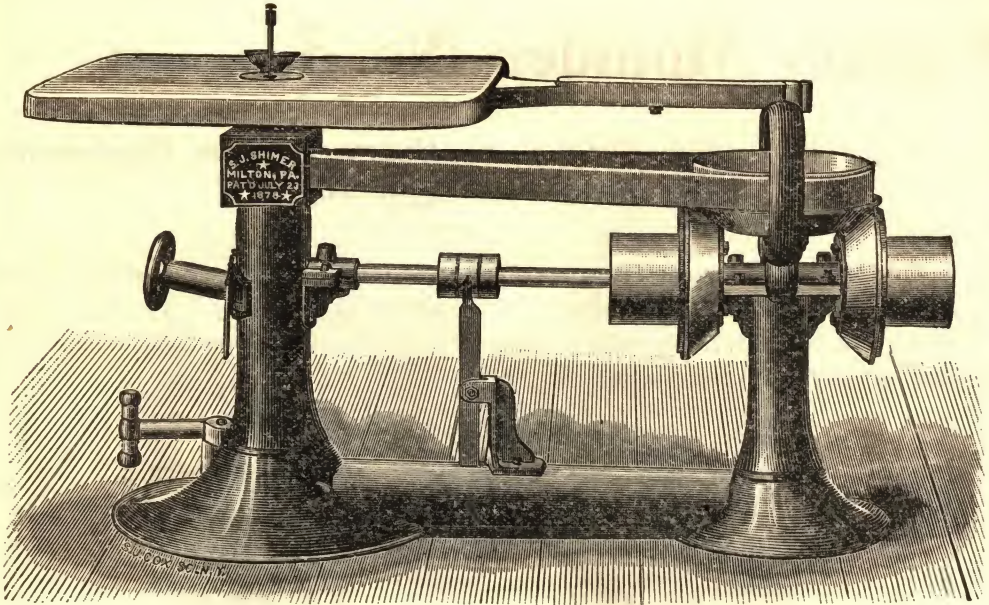


FIG. 128.

Variety Moulder, No. 4.

WEIGHT, 950.



*For the Furniture Factory, Planing Mill,
and all ordinary variety work.*

This Machine is complete and ready for work—no separate counter-shaft, but all neatly built upon one base, combining great strength and durability. The mechanism for raising and lowering the Spindle is within the upright that supports the table, and is operated by the hand-wheel. (See Fig. 129.)

The "T" on the base of the Machine connects with an eccentric joint arranged between springs below the base plate, and works the shipping lever.

The "T" will stand at any angle, and is set to the right or left with the foot. The operator's hands are free to move his work to the Cutter, which is instantaneous in its action, and is under such command that it can be brought to full speed or a standstill in a second of time.

The Friction and Belt Pulleys are, in a manner, one, and, therefore, as light as is possible to make them.

The Counter-Shaft Bearings are placed immediately below the point of frictional contact, to secure the power at once direct and strong. The operator has full and perfect command of the Machine, *without moving out of position.*

To change Spindles, throw off the belt and run the housing, by means of the hand-wheel, to the top of table, when one part is readily changed for another part—having the size Spindle wanted. Size of Table, 33 by 35 inches.

Driving Pulleys 7 inches in diameter, $5\frac{1}{2}$ face, and should make 800 revolutions per minute. Shipping weight, 950 pounds.

Price, for Machine with one Spindle,

\$140.00

" Extra Spindle, with Housing,

10.00

One Spindle only, sent with this Machine, unless otherwise ordered.

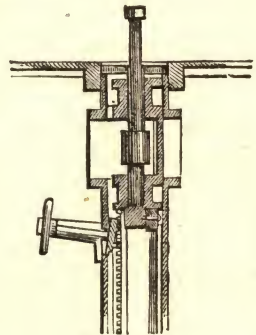


FIG. 129.

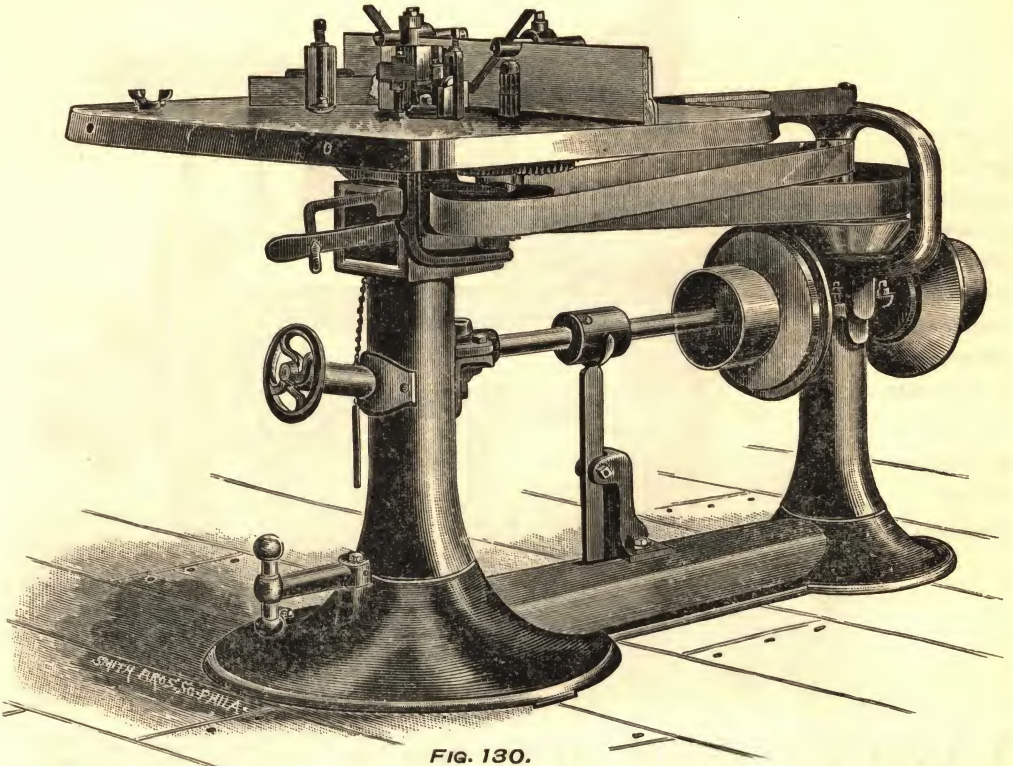


FIG. 130.

Variety Moulder, No. 5.

Weight, 1100.

For the Furniture Factory, Planing Mill, and all ordinary Variety Work.

This Machine is complete and ready for work—no separate counter-shaft, but all neatly built upon one base, combining great strength and durability. The Mechanism for raising and lowering the Spindle is within the upright that supports the table, and is operated by the hand-wheel. (See Fig. 131.)

The "T" on the base of the Machine connects with an eccentric joint arranged between springs below the base plate, and works the shipping lever.

The "T" will stand at any angle, and is set to the right or left with the foot. The operator's hands are free to move his work to the Cutter, which is instantaneous in its action, and is under such command that it can be brought to full speed or a standstill in a second of time.

The Friction and Belt Pulleys are, in a manner, one, and, therefore, as light as is possible to make them.

The Counter-Shaft Bearings are placed immediately below the point of frictional contact, to secure the power at once direct and strong. The operator has full and perfect command of the Machine, *without moving out of position.*

To change Spindles, throw off the belt and run the housing, by means of the hand-wheel, to the top of table, when one part is readily changed for another part—having the size Spindle wanted. Size of Table, 33 by 35 inches.

Driving Pulleys 7 inches in diameter, $5\frac{1}{2}$ face, and should make 800 revolutions per minute. Shipping weight, 1100 pounds.

This Machine has self-feeding attachments, which will work any light mouldings up to two inches, and is well suited for Sash, Blind Slats, Blind Stiles, Door O. G., Grooving, etc., and upon very small work it has decided advantages over the regular Moulding Machines. The feed works are secured to the under side of the table, out of the way of the workman.

The Guide, Spring Posts and Feed Rollers shown on bed of Machine can be taken off in one minute's time, when the Machine is ready for variety work.

Price, for Machine with one Spindle ($\frac{7}{8}$),	\$170.00
" Extra Spindle ($\frac{7}{8}$), complete, with Housing,	10.00

Two Spindles are sent with this Machine, unless otherwise ordered.

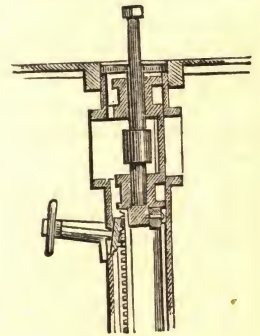


FIG. 131.

You never
tire of the
make-up
of this
Machine,
which is as
simple and
effective as
it is durable.

For price of
Cutters,
see page 124.

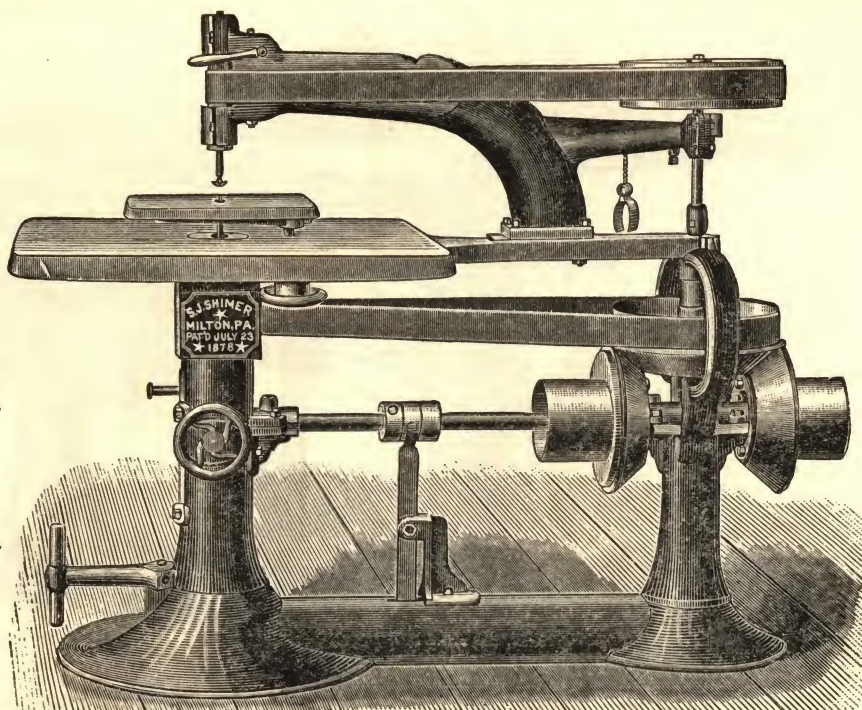


FIG. 132.

VARIETY MOULDER, No. 6.

Patented July 23, 1878,
and November 30, 1886.

For the Furniture Factory, Planing Mill, and all ordinary Variety Work—Surface Moulding, Sunken Panels for Solid Drawer Fronts, Corner Blocks, and Irregular Tracings, Rosettes, Etc., Etc.

This Machine is complete and ready for work—no separate counter-shaft, but all neatly built upon one base, combining great strength and durability. The Mechanism for raising and lowering the Spindle is within the upright that supports the table, and is operated by the hand-wheel. (See Fig. 133).

The "T" on the base of the Machine connects with an eccentric joint arranged between springs below the base plate, and works the shipping lever.

The "T" will stand at any angle, and is set to right or left with the foot. The operator's hands are free to move his work to the Cutter, which is instantaneous in its action, and is under such command that it can be brought to full speed or a standstill in a second of time.

The Friction and Belt Pulleys are, in a manner, one, and, therefore, as light as is possible to make them.

The Counter-Shaft Bearings are placed immediately below the point of frictional contact, to secure the power at once direct and strong. The operator has full and perfect command of the Machine, *without moving out of position.*

To change Spindles, throw off the belt and run the housing, by means of a hand-wheel, to the top of table, when one part is readily changed for another part—having the size Spindle wanted. Size of Table, 33 by 35 inches.

Driving Pulleys 7 inches in diameter, $1\frac{1}{2}$ face, and should make 800 revolutions per minute.

This Machine cuts Solid Panels to pattern, guided by collar that automatically takes its position when you start the Machine, and drops out of the way when you stop it. The Cutter in the overhanging arm of the Machine, has a perpendicular adjustment of one inch, and is operated by the handle shown in the cut, attached to an eccentric lever that is automatically locked to the one position when at work. The work is done on the small table, which is adjustable by means of a hand-wheel, to suit the cut. The cut can be made either from the top or from the bottom. The Cutter can be placed in either the upper or the lower Spindle.

This attachment is designed for sinking Panels, Surface, irregular Mouldings, Carvings, &c. When the Machine is needed for Edge Moulding, the attachment is thrown out of the way, as shown by the engraving on the next page.

Price, for No. 6 Machine, \$275.00

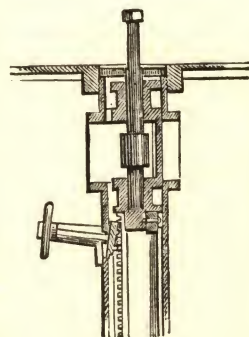


FIG. 133.

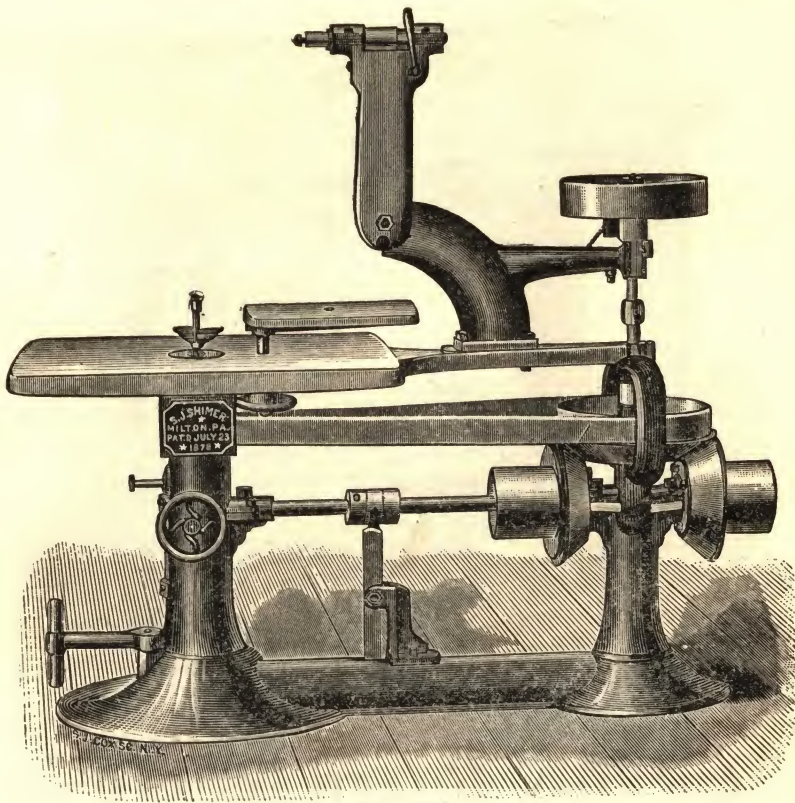


FIG. 134.

Variety Moulder, No. 6, In Shape for Edge Moulding.

Patented July 23, 1878, and November 30, 1886.

Compare this Machine with the one on page 130 which is the same. The change is quickly made. To change No. 6 from Surface Moulder to Variety Moulder, disconnect the rod that runs the incline on the "T" lever, and pin it up. Run the housing up, by means of the hand-wheel, until it stands above the belt line; remove the one Spindle; substitute the other, and set-screw it to the housing. Turn the small table back under the arm. Raise the arm, as shown in cut; disconnect the shaft that runs the upper pulley, and the Machine becomes an Edge Moulder, *without having any of its parts unbolted and laid away.*

FOR DESCRIPTION, SEE PRECEDING PAGE.

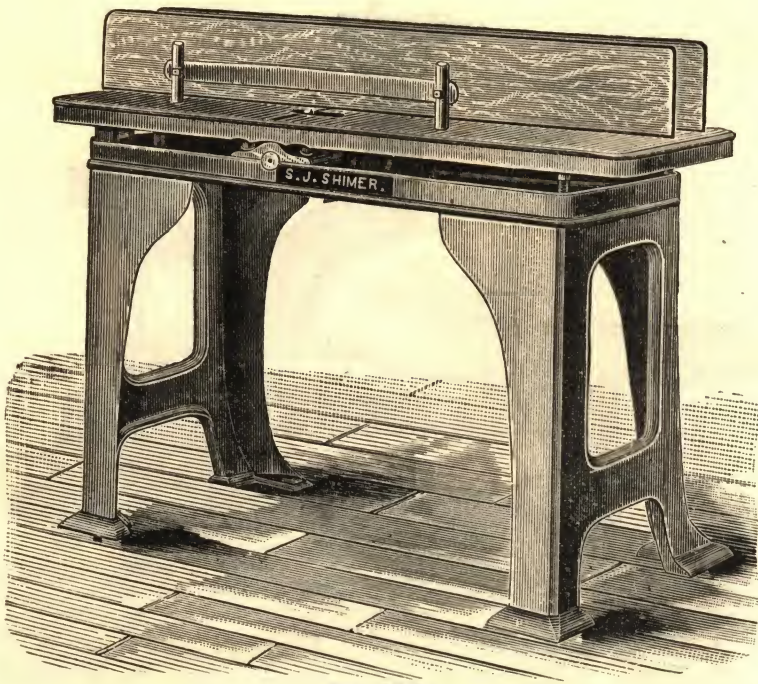


FIG. 135.

Our Box Board Matcher.

The frequent calls for a mandrel with a set of Matcher Heads, for matching Box Boards, has prompted us in designing the accompanying Small Hand Matcher, which is well suited to take the place of the cumbersome home-made or wooden frame machines. Since these engravings were made, however, the design of the guides has been changed and improved. We now make them in the form of a parallel rule, adjusting simultaneously for different thicknesses of boards in an instant of time. The guides, as we now make them, are about two inches high, whereas those shown in the engraving were four inches wide or high. A moveable plate in the bed of the machine adjusts by means of a single screw, for light or heavy cut.

The Machine is in every way well suited for the purpose designed, and being supplied with our Patent Matcher Heads, will be found very complete.

The shaft is made of steel and runs in self-oiling boxes.

Pulley is 4 inches in diameter, with 4-inch face, and should make 3,500 revolutions per minute.

Table raises to get at the Heads, to sharpen them.

Price, complete, with one set Shimer Matcher Heads \$90.00

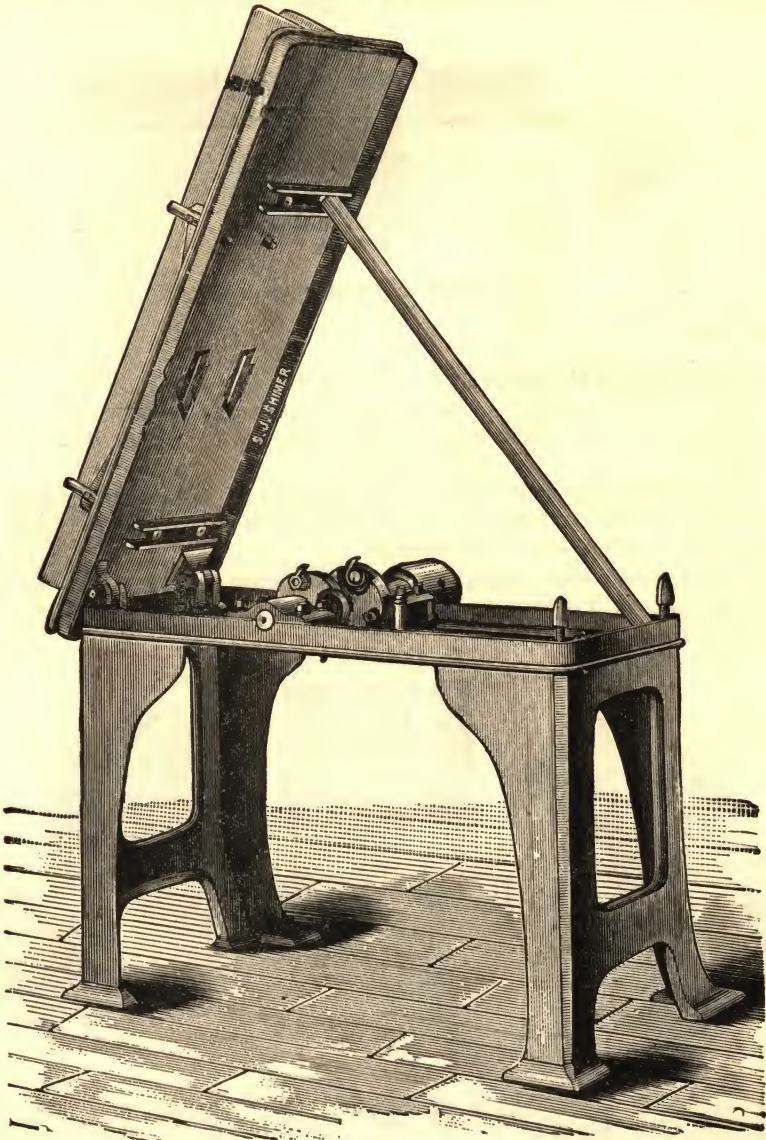
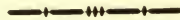


FIG. 136.

BOX BOARD MATCHER

With Table Raised to Sharpen Bits.



FOR DESCRIPTION, SEE PRECEDING PAGE.

Shimers' Beading Attachment.

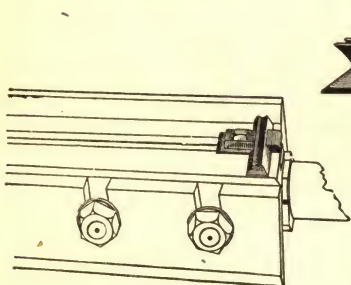


FIG. 138.

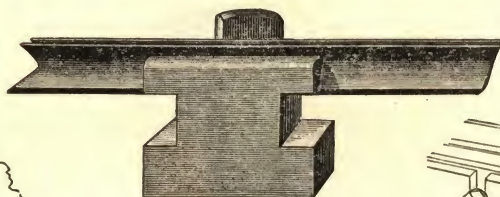


FIG. 137.

Patented August 14, 1888.

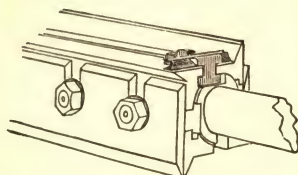


FIG. 139.

This Beading Attachment can be applied to any four-sided Planer Head. Two of the knives are removed, as represented in the accompanying cuts. The Beading Tools are made of steel and formed to fit in the slots and take their place on the Head on opposite sides.

One bolt fastens the Cutter rigidly to the Head, anywhere along the line of the slot. The Cutter is taken out and filed so as to leave a lip on the lower side below the cutting edge, which serves as a chip breaker.

It is quickly and easily applied and just the thing for every Planing Mill.

Price, per set, (2), complete with Bits, \$8.00
 " New Bits, each 1.25

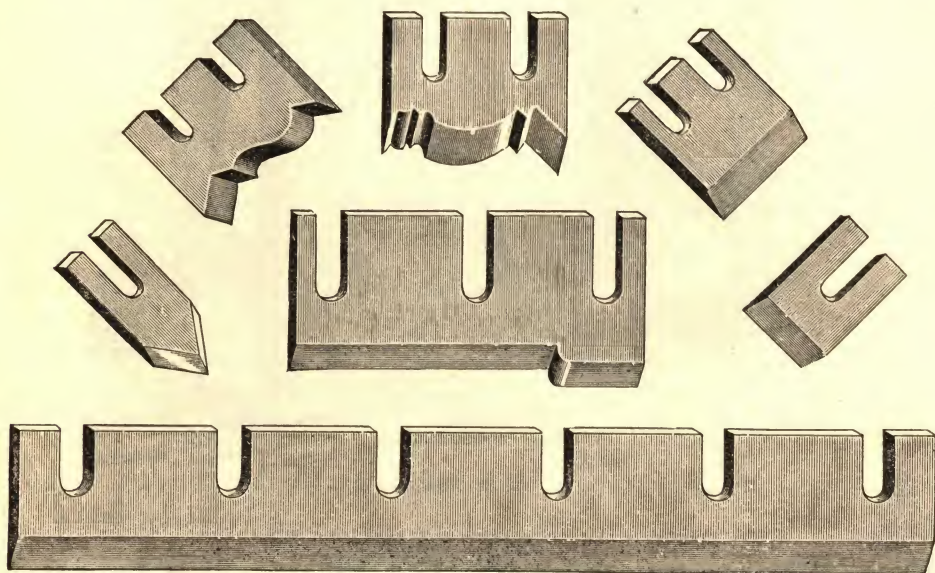


FIG. 140.

Moulding Blanks and Knives, finished to pattern, we can furnish at lowest manufacturers' prices. We sell a well known knife, made of excellent quality of steel, and guarantee them.

Straight Steel in Bars bevelled on edges for holding between Shaper Collars, prepared to order and sold by the lineal foot.

Steel Slotted Shaper Collars for holding straight Bits, all sizes. Prices on application.

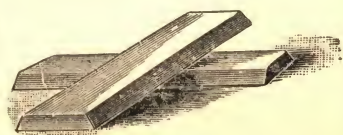
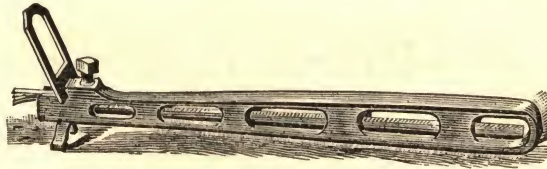


FIG. 141.

Shimers' Emery Wheel Dresser.

Just What You
Are looking for.



Patented
April 9, 1881.

FIG. 142.

A Tool to true an Emery Wheel, or take off the glaze and leave the wheel sharp and free cutting. A DIAMOND, because of its hardness, will cut, grind and injure the grains of emery that enter into the composition of wheels, which accounts for their dullness when faced off with a Diamond. This Tool consists of a combination of a number of little spring steel picks, that vibrate when brought into contact with the wheel, and every vibration produces a stroke, thus loosening the Emery and turning up the wheel very rapidly, giving it a good cutting surface. The importance of keeping the Emery Wheel true should be understood by everyone—

First, because of Safety.

Emery Wheels are run at high speed, and if out of balance are subjected to a strain equal to the eccentric weight multiplied by the velocity, and the part already under the greater strain, by reason of its being out of round, must also do the heaviest cutting.

Secondly, because of Economy.

A wheel kept in good shape will last longer and do more work in a given time. And the neatness of the grinding is a mark of ability on the part of the workman. The Tool will save its cost in a week. With each Tool we furnish two extra sets of picks, and mica shield to protect the eyes, which shield is placed in a slot in the end, as per cut.

Price, by Mail, \$1.25 net.
" " Express, 1.00 "

Price, Extra Picks, per set, \$ 10
" 12 sets of Picks, 1.00

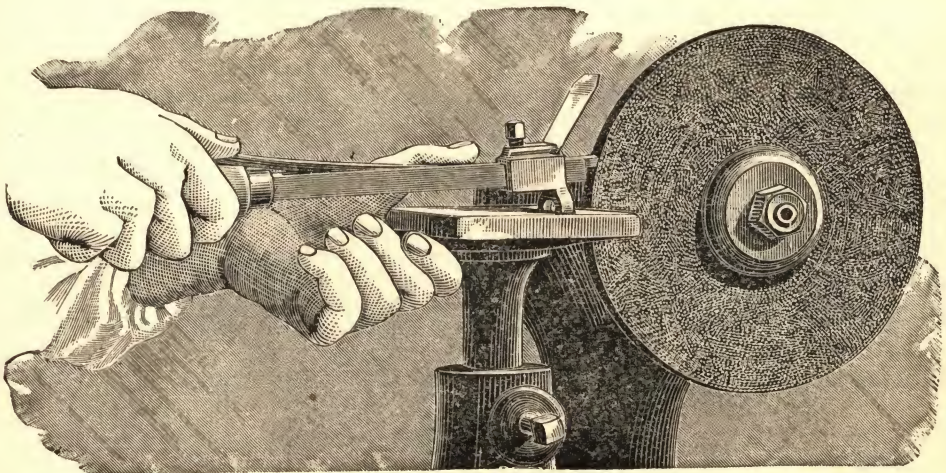


FIG. 143.

NOTICE THE DIRECTIONS:

The Tool consists of Spring Steel Points, that vibrate when brought in contact with the wheel, and therefore these spring points must PROJECT BEYOND THE END OF THE HOLDER from $\frac{1}{4}$ to $\frac{3}{8}$ of an inch, in order to allow them to vibrate freely. It is held in position, as shown in the cut, FIRMLY UPON A SOLID REST, the steel points touching the wheel ABOVE THE CENTRAL LINE, in all respects as you would use a turning chisel. Its operation is like so many little picks, loosening the grains of Emery at every stroke. It does not cut or injure the Emery that enters into the composition of the wheel, but the grains are left sharp and the stone free cutting. With a little practice, and a study of the Tool, it will be preferred to any DIAMOND that can be offered for the purpose. This Tool is light, and calculated to meet the wants of the saw and planing mill. It will not sharpen heavy wheels used for grinding stove plates, etc., in foundries.

❖ — I · N · D · E · X — ❖

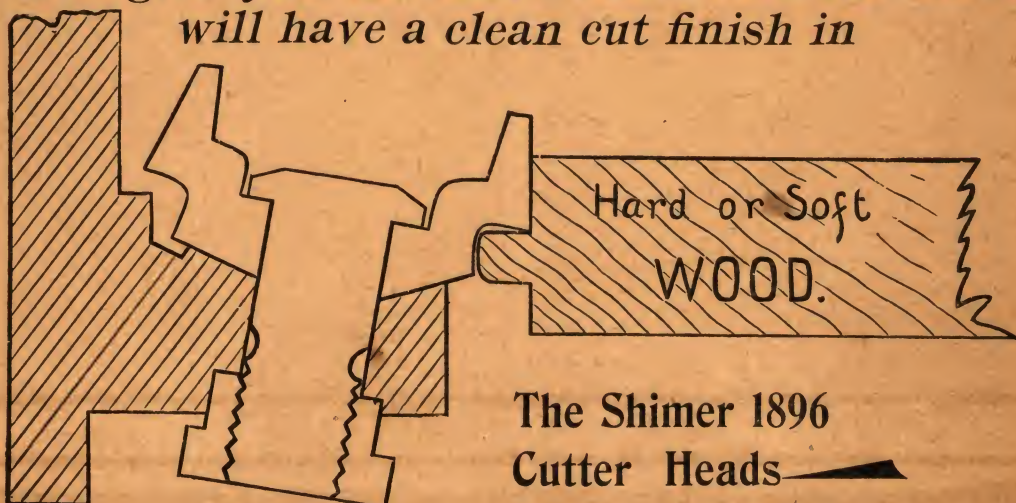
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The Best is the Cheapest!

The Shimer 1896 Cutter Heads

*Will give you the best results and the Knot
will have a clean cut finish in*



**The Shimer 1896
Cutter Heads**

Have conical bit centering seats outwardly inclined, to give the bolt a stronger grip upon the Head metal. The Head metal partly encircles the Bit and gives it a better seat surface. The Bits taking position on the Head as above shown, carry a greater protection to their cutting edges and by reason of their construction run longer at one sharpening and cut cleaner.

**We stamp the Shimer 1896 Cutter Heads
with our Trade Mark and Patents,**



Registered Nov. 20, 1894.

Patented July 18, 1882.	Patented June 9, 1885.	Patented August 2, 1887.	Patented February 12, 1884.
" April 28, 1891.	" June 9, 1885.	" August 3, 1887.	" June 9, 1885.
" June 7, 1892.	" August 14, 1888.	" October 11, 1887.	" November 30, 1886.
" October 9, 1894.	" August 14, 1888.	" April 1, 1884.	" November 30, 1886.
" May 28, 1895.	" April 3, 1888.	" November 17, 1891.	" November 29, 1892.
" March 3, 1896.	" June 26, 1888.	" May 10, 1881.	" October 1, 1895.
	" October 29, 1889.	" March 3, 1896.	" March 3, 1896.

By which you will know them. *When you buy a new set of Shimer Cutter Heads, write or telegraph us before using them if they do not carry our Trade Mark.* In the make-up of the Shimer 1896 Cutter Heads we incorporate all of the latest improvements and finish them in solid flange sections, or Expansion (two parted sections) for quick change and *Tight and Loose* fit of Tongue and Groove.

Address

Samuel J. Shimer & Sons,
Milton, Pennsylvania.

